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McNAB plan scotched in SED takeover

by Olga Whitas
Scottish Correspondent

The Secretary of State for Scotland has firmly rejected the idea of a McNAB, a central agency to oversee Scottish higher education outside the universities on the lines of England's National Advisory Body.

Instead the Scottish Education Department will increase its own already formidable powers. Three more central institutions directly funded by the SED are to be established and the department has hinted that it would also like direct funding of some non-advanced courses in local authority colleges.

The long-awaited decision leaves the present system virtually unchanged. Eighteen months ago, the report of the Scottish Council for Tertiary Education was published, and the one point on which its majority and minority reports agreed was that a new body should be responsible for funding tertiary education.

A Scottish Tertiary Education Advisory Council is to be set up in the new year, but it will be a think tank rather than a McNAB, with its advice sought on broad priorities rather than detailed questions of resource and student intake.

Direct funding could be introduced in local authority colleges of certain non-advanced courses "of national significance such as information technology". They would then also require formal approval from the SED.

The new council will have a specific remit of collaborating with NAB, the University Grants Committee, and the Manpower Services Commission, but since it has no financial responsibilities, it will undoubtedly be a poor relation.

The Government has completely rejected the minority report proposals that all tertiary education should be run by the local authorities. It has backed the majority view of a split between advanced and non-advanced further education, with advanced further education funded and run cen-

trally, while non-advanced work remains under regional control.

It has also backed the majority proposals that Leith Nautical College should become a central authority college, and that Napier, Glasgow and Bell Collages of Technology should become central colleges.

Mr Keir Bloomer, deputy general secretary of Scotland's largest teaching union, the Educational Institute of Scotland, has condemned the government for squandering an opportunity by simply "marginally adjusting the frontier running through the confused landscape of Scottish tertiary education."

However, Dr Peter Clarke, principal of Robert Gordon's Institute of Technology, Scotland's largest central institution, and chairman of the Scottish Committee of the Council for National Academic Awards, praised the announcement from Scottish Secretary Mr George Younger.

He and several other principals had disagreed with the Tertiary Council proposal of a new body responsible for funding "because we saw from the experience of the UGC that partiality and special pleading would sour relationships."

"Committees are rather like babies: it's better if they start with brains, and teeth can be added later."

Dr Clarke added, however, that he was unhappy that little had been said about liaison between Scottish universities and higher education institutions.

Leith's principal, Dr Alan Watson, condemned Mr Younger's decision to transfer his college. One reason given for the transfer is that it has no degree course, but Dr Watson said the SED had been sitting on a proposal for a degree in sea transport for some time.

However, both Lothian region's director of education, Mr David Sample, and education committee chairman Mr James Gilchrist, have welcomed the transfer of Leith, which they say will allow region to rationalize and develop courses.

Universities will avoid more cuts

Both the Department of Education and Science and the University Grants Committee are still confident that further cuts in the universities next year can be avoided despite new pressure from the Treasury for a reduction in public expenditure.

The £30m of cuts in this year's education budget, announced by Chancellor Mr Nigel Lawson two weeks ago, are being regarded as a minor hiccup although the bulk of this saving will have to come from the grant to universities.

The UGC held its last meeting before its summer recess last week and no emergency meetings are planned. The next meeting of the committee will be its annual residential weekend in September. In the meantime Sir Edward Parkes, the UGC chairman, will handle the delicate negotiations with the DES and Treasury under his normal vacation powers.

No special letter will go to universities on how their share of the £30m is to be distributed. The UGC expects that

they will continue to receive their anticipated grants without deduction. As reported in *The Times* last week shortfalls in other funds, in particular for restructuring, are expected to be used to make up the present deficiency of the Treasury's grant.

However universities will shortly receive letters giving their provisional grants for next year, 1984/85. These will assume level funding; the grants will not be recalculated to start from a lower base because of the £30m emergency cuts package.

Sir Keith Joseph, the Secretary of State for Education and Science, is expected to fight hard to protect the universities in this autumn's horse-trading in the Cabinet about next year's public expenditure plans.

Backed up by the UGC he will argue that there has been no overspending by universities and therefore that they should not suffer from any general cuts that are the result of overspending in other areas.

He is determined to maintain the

science budget and the universities' "new blood" posts and has the support of the Prime Minister in at least the first of these. The number of "new blood" posts in the humanities and social sciences is to be doubled to 60 a year in the two remaining years of the scheme and this extension of the experiment is expected to go ahead.

The DES and the UGC are both anxious that the morale of the universities, which has just begun to recover from the trauma of July 1981, should not be undermined by rumours of further cuts which they are determined to fight hard to avoid.

Ministers have acted swiftly to counter suggestions that student awards might be a main target of the cut. An otherwise routine Commons written answer by the under secretary for higher education, Mr Peter Brooke, was being interpreted as reaffirming that the 4 per cent increase announced in March would stand. Announcements of the remaining supplementary rates will be made in the near future.

ACSET plans central control

by Patricia Santinelli

A national advisory council for accreditation designed to impose a new powerful form of central control on all teacher training courses, and the extension of the postgraduate route to 36 weeks was recommended this week by the Government's advisory body on teacher training.

The Advisory Committee for the Supply and Education of Teachers' advice which is likely to be accepted by the Secretary of State for Education will mean that all existing and new courses will be checked against new criteria before they are granted approval.

ACSET's decision to recommend an extension of the PGCE to 36 weeks from 1984 is based on the strong belief that the new criteria cannot be achieved within the current average length of the 30-week postgraduate course. It has done so even though it is aware that this has considerable resource implications and must be accompanied by some increase in public expenditure.

The advisory council is expected to be an independent transitory body

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NAB and DES agree to differ on cuts

by Karen Gold

Several thousand extra students and a greater than expected fall in the unit of resource in polytechnics and colleges may be the result of a disparity in calculations of student numbers between the Government and the National Advisory Body.

The NAB committee, after its meeting with Sir Keith Joseph, the Secretary of State for Education and Science, last week, announced that it had agreed to a compromise in implementing the proposed 10 per cent fall in the 1984/85 intake of students in the unit of resource of some 13 per cent over two years, and a denial of access to 5,000 full-time equivalent students.

The NAB figures were based on estimates sent by local authorities in response to its planning exercise; the NAB has been working on the assumption of this kind of compromise, and stressed that the figures were a mini-

mum. "The plan is to seek to maximize access while maintaining proper standards," a spokesman said.

But at the meeting, with Sir Keith Joseph, the NAB committee was told by the DES that because there had been no reduction in the 1982/83 intake of students, to achieve the compromise by reducing the 1984/85 intake would require a much larger reduction in students: up to 12,000.

DES projections, made from a different statistical base to the NAB's, suggested that student numbers might fall from the planned new admissions of 67,000 to 55,000, compared with the NAB estimate of 63,000 under the compromise solution.

The DES and the NAB agreed, with the DES arguing strongly that access should not be reduced further than the NAB calculation of 5,000, that the planning exercise should go ahead on NAB figures.

But if the DES calculations are

correct, the system will have to absorb up to 7,000 unexpected students, leading to a further fall in the unit of resource of an estimated two per cent - up to 15 per cent - although precise figures have not yet been worked out.

The situation is further complicated by the promise given by Sir Keith to the NAB committee that he would look at the problem of access and maintaining standards through the unit of resource and give the NAB an answer before the autumn.

The Committee of Directors of Polytechnics, which has consistently opposed large reductions in the unit of resource, said it was deeply concerned about the 13 per cent reduction in the unit of resource and would be even more so if that were increased.

The National Union of Students claimed that the aim was to widen the divide between academic standards in the universities and public sector higher education.

PCL courses lose approval

The Council for National Academic Awards has made an unprecedented decision to withdraw approval from three large courses in the Polytechnic of Central London's engineering department.

The polytechnic is to appeal against the decision, which was made after the CNA A electrical, electronic and computer engineering board visited the school of engineering and science last month.

The two full-time degrees which have lost approval from the next academic year form almost two-thirds of PCL's engineering degree courses. They are the BSc and BSc (Hons) in electrical and electronic engineering, and the BSc and BSc (Hons) in control and computer engineering, which between them have around 220 students. The BSc in mechanical engineering, the third full-time degree, with about 120 students, has been approved.

Approval has also been withdrawn from a part-time MSc in digital systems

and instrumentation, which has around 70 students spread over two years. Students already on the three courses will be allowed to continue to the end, but those who have failed their first year exams will be advised to transfer.

A CNA A official said that a decision to withdraw approval from three courses in one department had never been made before. The reason was concerns of the management and organization of the courses.

The attention of the polytechnic has been repeatedly drawn to the difficulties that were perceived and that these were due to poor arrangements in the school of science and engineering for the control and management of the courses.

There is widespread resentment among staff and students at the PCL that the CNA A's decision and its going to reduce some London courses before the National Advisory Body made its own recommendations.

مكتبة جامعة القاهرة

David Jobbins report on UKCOSA's annual conference

Overseas policies put to test

A permanent new forum to test the effects of changing Government policies for overseas students could be set up by the autumn.

It is based on the interdepartmental working group set up to review Government policies in the light of last year's Overseas Students Trust report. It is expected to include outside agencies involved in the overseas student question in a formal panel or round table.

It could act as a sounding board not only for new policies but as a focus for feedback from experts working in the field.

Mr Ray Whitney, under-secretary at the Foreign Office, indicated his general support for the plan when he addressed the UKCOSA conference last week. Although he stopped short of a firm announcement that the "round table" would be established, he promised consultations with interested parties about its composition and role.

But he did accept the need for consultation between the IDG and outside bodies. These are likely to include the UKCOSA, the National Union of Students and a myriad other organizations with interests touching on the overseas student issue. There must be concern in official circles that the new body should be sufficiently large to represent governmental and non-governmental claims while keeping it from becoming unwieldy.

The initiative for setting up the new forum lies largely with the scholarship and awards unit of the Foreign Office but ministers feel that the interdepartmental group should remain its focus.

But there are fears the idea may become stuck at the level of informal consultations between departments. Ms Gill Taylor, UKCOSA's new executive secretary, said: "I am concerned we do not get stuck with informal consultations with the Foreign Office and have no contact with the interdepartmental group."

Each foreign student 'equals £600 profit'

British taxpayers gain at least £600 for every overseas student studying in Britain, the annual conference of the United Kingdom Council on Overseas Student Affairs was told.

The calculation came from Mr John Mace, reader in the economics of education at London University's Institute of Education.

His conclusion contradicts the view expressed by Professor Mark Blaug that the trade and invisible export earnings derived from overseas students should be set at zero. Trade benefits should not be ignored just because they are impossible to measure precisely, Mr Mace argued.

He said it depended on the observer's economic persuasion. "Keynesian economists would tend to see overseas student spending in this country as a benefit. The monetarist view is more difficult to argue because it depends on the current level of economic activity."

But on the monetarist model, if the economy was operating below capacity and unemployment was above its "natural rate," an increase in aggregate

demand should be seen as a clear economic benefit.

"One way around the problem is to treat overseas spending as an invisible export and if we, as the Thatcher government does, believe in export-led growth then it is an economic benefit."

Discussion revolved around whether overseas students cost or made money, but there was an impassioned plea from Mr Tommy Gee, secretary of the Institute of Development Studies at Sussex University, not to lose sight of the humanitarian and other arguments for internationalism.

Mr James Porter, director of the Commonwealth Institute, drew attention to the lack of authoritative research into the effects of British education on third world development and on the experience of individual students in the UK.

Delegates to the conference at Bulmershe College, Reading, resolved to reassert the "internationalist" perspective alongside the narrower one of economic self-interest and to promote international education through commissioning or undertaking research.

Public sector enrolments slump

First-year enrolments by overseas students at British universities showed a slight increase in 1982/83 but there was a dramatic 19 per cent fall for polytechnics and other higher education colleges, according to official provisional figures issued this week.

University first-year enrolments rose by 1 per cent compared with 1981/82, largely because of a 2 per cent increase in postgraduate registrations.

But the public sector figure compares with a fall of only 4 per cent between 1980/81 and 1981/82.

Provisional figures for non-advanced further education show that the

number of overseas students in the first year of their studies remained almost static at 6,000 following a dramatic slump from a peak of 18,800 in 1977/78.

Excluded students from the European Economic Community, who pay fees at the home rate, the Department of Education and Science estimates that the overall number of overseas students fell by 11 per cent from 55,600 in 1981/82 to 49,300 last year. In higher education the drop was 10 per cent.

Students from Malaysia, Nigeria, Hongkong, Iran and Greece made up over 40 per cent of the overseas students in higher education.

Vice chancellors unhappy with Leverhulme proposals

by Paul Flather

Vice chancellors fear some of the main recommendations of the final report of the Leverhulme inquiry into higher education might harm the work of universities.

The Committee of Vice Chancellors and Principals says that a general restructuring of courses, the separation of research and teaching funding, or the establishment of a general academic review body "are likely to harm rather than improve the work of universities."

The committee also says that some of the proposals of the study, entitled *Excellence in Diversity*, particularly those dealing with course structure, might lead to greater uniformity, not diversity.

The two-year study, resulting in 11 volumes of evidence and argument, is the most comprehensive inquiry into higher education since the Robbins report 20 years ago. It called for a shift to the specialized three-year honours degree, preferring broad courses fol-

lowed by specialization.

"We believe the developments over the coming decade should aim to widen access to universities and to reduce undue specialization in schools provided that they do not impair the distinctive contribution made by universities to teaching, research, and scholarship at the highest level," the committee states.

Vice chancellors do, however, plan to discuss the issues raised in the report at their next meeting in September, seeing questions about premature specialization and the need to maintain academic standards as part of wide-ranging current debate.

But it is clear the CVCP after a preliminary look at the report was keen to put down a marker, particularly opposing any new centralized body modelled on the Council for National Academic Awards to monitor university standards. The study was organized by the Society for Research into Higher Education and cost about £100,000.

Courses 'must be relevant'

New advanced further education courses must be directly linked to industrial, professional or commercial needs, or they will not receive Department of Education and Science approval.

Courses intended to start in 1984/85 will have to be related to industrial needs for skilled technological or scientific workers, or be otherwise essential for industry, commerce and the professions, a DES circular says.

The new arrangement was agreed by the DES in consultation with the National Advisory Body, regional advisory councils, local authority education and voluntary bodies.

Part-time and full-time courses will be affected. But departments that want to make minor modifications to their existing courses can do so without

going back to the DES for those changes to be approved.

The circular also gives blanket permission for any courses to take place which are provided on a "full-time" basis funded by sponsors and with a trained staff of employees, or if the sponsors or other people nominated by them.

The change will give a boost to the Government's support of courses to be run by small private industry or commerce, and by voluntary bodies. It also gives a boost to the initiative which has been set up against bureaucratic and financial problems for polytechnics and colleges in meeting industry training requirements at short notice.

Unions fear collaboration

Leaders of the two main lecturers' unions say they will resist collaboration between universities and polytechnics at local level if it means diminished educational opportunities.

It is a joint response to a policy statement from the vice chancellors and polytechnic directors advocating local co-operation. The presidents of the university and college lecturers' unions say "Collaboration must be designed to enhance opportunity not to diminish it."

Mr Steve Ruhemann, of the Association of University Teachers, and Mr Cecil Robinson, of the National Association of Teachers in Further and Higher Education, welcome the "broad thrust" that co-operation is most effective when it springs from initiatives of neighbouring institutions and departments.

They support the view expressed by the vice chancellors and polytechnic directors that, inflexible, national bureaucratic structures to supervise co-operation would be counter-productive.

But they enter one stern reservation about the alleged failure of the vice chancellors and directors to state firmly and clearly that the fundamental purpose of co-operation is to allow greater public participation in, and maximize research.

"We are strongly opposed, in the interests of the public as of our members, to measures of collaboration which are designed to bring about a reduction of the resources allocated to the system and hence of diversity of opportunity for students and career prospects for staff."

In particular they promise determined resistance to a suggestion that survival of departments might depend on collaboration.

"This implies a threat of unacceptable pressure on our members," the presidents say. "We could not tolerate the continuation of courses in different institutions being dependent on their being merged."



Canadian kite designer Miss Skye Morrison, one of the 1983 artists in residence at Bretton Hall College, Wakefield. She has exhibited her work as textile design lecturer at Sheridan College, Toronto, throughout the world.

British effort 'a picture of muddle'

by Jon Turney

Science Correspondent

Britain could fall behind in the lucrative new technology of satellite remote sensing unless there is better co-ordination of national strategy for research, development and exploitation, according to Royal Society evidence put before a House of Lords select committee.

The society has published its evidence to the Select Committee on Science and Technology's inquiry into remote sensing and digital mapping — which involves encoding and processing very detailed images of the earth's surface from instruments in orbit.

In common with other submissions, the society's memorandum stresses that the area is developing rapidly, and involves a wide range of different organizations. It says remote sensing has now become an enabling technology in some ways as important as information technology or biotechnology.

The Royal Society argues that a national strategy to develop remote

sensing should be operated by complementary public and private sector networks, with the public sector interests co-ordinated through the National Remote Sensing Centre at Farnborough.

The memorandum says the Ordnance Survey should play a leading role in developing mapping applications of remote sensing data, and should maintain strong links with the centre. The whole effort should be coordinated by an interdepartmental committee and a joint research councils committee, the society believes.

The committee has now finished taking written and oral evidence before the parliamentary recess, during which it will study programmes for developing satellite observation overseas. The apparent lack of co-ordination of the British effort is likely to be a major concern of their report, expected to be written before the end of the year. When Sir Hermann Bondi of the NERC appeared before the committee, Lord Chorley told him the evidence so far showed "a splendid picture of muddle".

Six lead on ethnic training

Six urban universities and polytechnics will be the first participants in the long-awaited national programme of multicultural education for teacher trainers being launched this autumn.

The scheme will be directed by Professor Maurice Craft, dean of the faculty of education at Nottingham University, one of the participating institutions.

The programme will draw on the now well-known findings of many surveys which have shown the inadequate preparation of teachers for work in a multicultural society and it will follow the 1981 recommendations of the Commons Home Affairs Committee.

It will consist of short courses of between one to three terms aimed at lecturers and i.e.a. advisers in initial and in-service education, which are to be offered at Liverpool and Nottingham universities, the London Institute of Education and at Birmingham,

Manchester and Sunderland Polytechnics.

Although each institution has developed its course along general outlines, all agreed that three broad elements should be included. These are the need for all children to know something about the multicultural society they live in; special needs such as language handicaps; and intercultural relations dealing with prejudice and racism.

The programme has no central funding but each institution has been able to obtain funding under the Department of Education and Science regional in-service arrangements, ranging from between £500 to £1,300. In addition the Boots Charitable Trust has provided £1,000 which is to be used for travel and administration.

A second phase is being planned for 1984/85 with the aim of establishing similar courses in more rural regions.

Edinburgh nursery reprieved

Edinburgh University's court has reprieved the day nursery for three years following vigorous campaigning from staff and students against its closure.

Edinburgh's Association of University Teachers had asked the Advisory Conciliation and Arbitration Service to intervene since the university refused to negotiate over the future of the nursery, due to close next summer.

The closure would have meant the loss of 14 jobs, the first university compulsory redundancies, the AUT also warned court members that the university, having already established the "nursery," might breach the Sex Discrimination Act if it closed.

It argued that most students using the nursery were postgraduates, and that a provision could attract overseas postgraduates.

The university said it could not continue to pay a spiralling subsidy, currently £14,000 of the nursery's £76,000 annual cost. But at the court meeting it was felt inflation had not increased as much as expected, and the university has agreed to give a fixed grant of £15,000 annually for the next three years.

The students association, which currently provides £10,600 annually, has agreed to increase its subsidy if necessary, and the university rector, liberal leader Mr David Steel, has also offered money from a discretionary fund.

The university court also approved a development plan, whose proposals included incentives to donors, ranging from a bust in a "hall of benefactors" to free university parking.

HMI warns of more cuts peril

by Paul Flather

Another squeeze in spending allowances fixed for polytechnics and colleges could lead to fundamental changes in the educational provision for students, Her Majesty's Inspectors say in a report this week.

The report based on HMI visits during 1982 states that three out of four institutions appeared to be coping satisfactorily with increased student numbers using a smaller teaching force, and some were even doing very well.

But the inspectors found evidence that "a further tightening of staffing ratios would require more fundamental changes in disposition and institutional management procedures". At risk could be the quality of instruction provided.

The report covers the effects of local authority expenditure on education provision during 1982 and was prepared for the Expenditure Steering Group (Education), comprising officials from the local authority associa-

tions, the Department of Education and Science, and the Department of the Environment.

It comes at a time when ministers at the DES are discussing ways to find new cuts totalling £30m. The steering group has already warned that compulsory redundancies would be needed among polytechnic and college lecturers if 5 per cent cuts were demanded next year.

The general conclusion of the report, which deals mainly with provision in schools based on 2,259 returns from 1,733 schools, and 671 returns covering 339 colleges and polytechnics is "needs to do better".

It states that the pace of deterioration has slowed, but it adds that "there is much to be done to make good the basic range of provision, and even more to meet necessary changes in population of pupils and students".

In one out of four further education institutions judged less than satisfactory the inspectors were concerned about the need to improve, update, or replace specialist equipment, about

shortages of laboratory and workshop materials, about inadequate book-stocks, and about shortages of technicians.

Many colleges, particularly those providing predominantly non-advanced courses, were becoming severely taxed by the increasing number of students they were attempting to cater for, the report states.

Sir Keith Joseph, the Secretary for Education, said he took seriously the concerns expressed in the report. He noted the position had not changed dramatically since last year, with a number of deficiencies which must be given attention, but also many satisfactory features on which to build. Colleges appeared to be adapting well to meeting new demands, with no evidence of any major defect in the system.

"As the report makes clear there is no simple relationship between expenditure on the one hand and the quality of education offered and the achievements of pupils and students on the other," he said.

Poor thesis rates blamed on supervision

by Jon Turney

Science Correspondent

Poor supervision is to blame for low thesis completion rates, according to students pursuing interdisciplinary PhD projects.

A study commissioned by the Joint Committee of the Social Science Research Council and the Science and Engineering Research Council found that problems with supervision were the most often cited reason for difficulties among respondents to a questionnaire sent to all joint committee funded research students working between 1970 and 1980.

The report, by Dr Tom Whiston of the Science Policy Research Unit at Sussex University, notes that PhD completion and withdrawal rates for students on joint committee grants compare unfavourably with those for science postgraduates on single-discipline projects — although the rates do not differ appreciably from those for straight science PhDs.

The joint committee was set up in 1968 to back projects which touch on interests of both councils, and most projects are in the developing area of social studies of science. The committee also administers the SERC "total-technology" scheme for industrially orientated PhDs on behalf of the council's engineering board.

The report suggests that the 500 or so students who have pursued PhD work funded by the joint committee often have problems stemming from intellectual isolation, working in underdeveloped areas, and tackling problems more complex than those faced at this level in physical, social or behavioural sciences alone.

But Dr Whiston concludes that "the large number of withdrawals, lapsed studentships and incompletions, clearly suggests that some form of remedial action is required".

Some efforts to deal with the special problems of interdisciplinary research appear unsuccessful — the report notes that multiple supervision, intended to help cover all aspects of the problem, gives rise to even more complaints from students than conventional arrangements. Dr Whiston writes that one of the points made most often was the need for one person to be directly responsible for each student.

Other changes proposed in response to the questionnaire included longer study periods, because interdisciplinary projects take longer to finish, having two external examiners to assess different aspects of the thesis, and more use of preparatory multidisciplinary courses.

Dr Whiston suggests the councils produce a booklet on good supervisory practice specifically for research students taking higher degrees under the joint committee; that there should be a national data bank of such theses to help new students see how others have faced the problems; and that universities be encouraged to fund liaison officers, to help set up projects with industry and improve communication between students and departments.



Unexpected company: this turtle is the creation of Debbie Smith, a ceramics student who has just graduated from the South Glamorgan Institute of Higher Education.

Lecturers sceptical

Lecturers greeted with scepticism this week remarks by the head of Hendon police school that he had been shocked by the racist tone of essays written by some of his cadets.

Commander Richard Wells said on BBC's *Panorama* that the "deplorable" attitudes expressed were out of character.

But Mr Peter Dawson, general secretary of the National Association of Teachers in Further and Higher Education, commented: "We cannot believe the racist attitudes apparently disclosed by the essays could have come as a surprise to Commander Wells or anyone else. There has been ample evidence of racism among the police for years."

Commander Wells added on the programme that one of the "fine sides" of the "miserable" affair in which a civilian lecturer handed the essays to the media, was that it "has helped us focus on a problem and cope with it".

But Mr Dawson said: "Short-lived sensational publicity does not of itself bring about the changes necessary in police training to combat racism. What counts is continued pressure."

Earlier this month North stressed the importance of a strong lay element in police training including the involvement of ethnic minorities.

But in response to the Police Training Council's own report the association came down heavily against the recommendation that a new training support centre should be attached to a university instead of the public sector.

Croydon prepares peace formula

The outlines of an agreement worked out at the highest level between education authority officials and union leaders may lead to a settlement of the dispute at Croydon College over an attempt to impose longer teaching hours.

It was thrashed out in talks this week involving Mr Peter Dawson, general secretary of the National Association of Teachers in Further and Higher Education.

ACSET plans central control

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with similar powers to the Council for National Academic Awards to visit institutions. Initially it is anticipated that its review of courses will take between two to four years, after which it will conduct quinquennial reviews.

The council would be advisory only, but it would function independently from the Department of Education and Science. Her Majesty's Inspectors, validating bodies, the University Grants Committee and the National Advisory Body.

Although its role would be basically to judge the suitability of courses for the professional preparation of teachers, it is expected that this would also extend to questions of academic content and standards, but without pre-empting the function of validating bodies.

Its membership, expected to be between 15 and 20, would be independent people representing teachers, teacher trainers and employers. A wider range of members might serve on sub-committees.

The council would be able to refuse to examine a course, unless it had been thoroughly discussed by local teacher training committees. ACSET recommends that each institution should set up such a committee comprising principally representatives of the institution, employers and pre-training teachers.

The council's new criteria are described as a distillation of current good practice. They would be reviewed periodically.

Institute bid to take over from ACACE

The National Institute of Adult and Continuing Education is now in a strong position to take over a substantial part of the remit of the Advisory Council for Adult and Continuing Education when it winds up in October.

An informal meeting has already been held with officers from the Department of Education and Science and the institute has been asked to put forward its suggestions. It is not likely a development council will be set up to replace the ACACE.

Roman Catholic college closes smaller site

by Olga Wojtas

Scottish Correspondent

The governors of Scotland's only Roman Catholic education college are to sell their east coast site after successfully fighting two Government attempts to close.

Craiglockhart College in Edinburgh and Notre Dame College in Glasgow merged in 1980 to form St Andrew's College of Education after the Catholic hierarchy put pressure on the Scottish Office, which wanted to axe Craiglockhart. A telegram urging support was even sent to the Pope.

A previous attempt to close Craiglockhart in 1977 was also hitherto opposed, with the hierarchy insisting that a Catholic presence must be maintained in the east of Scotland.

Now the governors of St Andrew's have said that all pre-service courses will be run in Glasgow, although they are giving consideration to an in-service base in the east.

Bishop Joseph Devine, chairman of the governors, who at present is in Lourdes, said the move was inevitable since there were now only 30 students at Craiglockhart site.

The decline in numbers stems from Government cuts in letsee, but Craiglockhart staff feel the running down of their site has resulted from the merger. It was never a marriage of equal partners and the power base of the new college was firmly set in the west.

The final blow fell when the Secret-

ary of State for Scotland recently announced that there would be an all-graduate teaching profession, with the primary diploma replaced by the BEd degree.

While the Craiglockhart site runs a diploma course, the Glasgow site offers the primary degree and all Craiglockhart's first-year intake have opted to transfer to Glasgow, leaving only 30 students in Edinburgh.

The governors have said that the 24 staff at Craiglockhart are not at risk. Most will transfer to Glasgow and nine full-time equivalents will carry out in-service training in the east.

The official hope is that whoever buys the site will lease some accommodation for in-service work, but it is expected that staff will move elsewhere, perhaps to Moray House College of Education, also in Edinburgh.

This has not however pleased Craiglockhart staff, who have always said it is vital to have pre-service courses as well as in-service ones. Redundancies do not seem likely at present so the Association of Lecturers in College of Education in Scotland has made no comment on the sale. The Scottish Education Department is also standing back, although it had no hesitation in approving the sale.

One staff member at Craiglockhart, who reported that colleagues were very demoralized and disheartened, said: "The real trouble is we don't quite know who we're fighting."

Trent is top of the social work pops

Trent Polytechnic has emerged as the most popular institution for non-graduate students seeking a course leading to a social work certificate, with each place chased by more than four students.

It is followed closely by Middlesex and Ulster Polytechnic, based at Newtonabbey, also with four students applying for each place, with Huddersfield, Kingston, Manchester and Coventry (Lanchester), Newcastle and Liverpool polytechnics, Southampton University, and Dundee College among those attracting more than three applicants a place.

Among institutions offering the Certificate of Qualification in Social Work to candidates with relevant degrees or diplomas, the London School of Economics, Goldsmiths' College, London, Nottingham University and Queen's University, Belfast, appear to be the most popular.

The figures are contained in the latest report on applications produced by the Central Council for Education and Training in Social Work. The report lists tables giving the first, second, third, and fourth choice, of CQSW applicants.

The council remains scrupulously impartial on the courses. But there are some interesting discrepancies, for example students seem to prefer the Manchester Polytechnic course to the Manchester University one, and Leeds University received just 36 first choice candidates for 50 places for its graduate course, while most other institutions were oversubscribed.

A spokesman for Trent Polytechnic suggested that the course was popular probably because it had been established for some years, with a good reputation, and because Nottingham was a convenient base drawing students from five neighbouring counties.

Overall the figures show that the training intake for residential staff taking CQSW courses went up significantly between 1981 and 1982.

British 'lack good contacts in Brussels'

British universities are missing opportunities to top the huge budget of the European Commission because they lack good contacts with the decision-makers in Brussels.

A paper just circulated by the Committee of Vice Chancellors and Principals says that no matter how good the flow of information to British universities, the key to winning research cash from the commission is getting to know the relevant officials and groups in the organizations.

The paper follows a visit to Brussels and Luxembourg in May by CVCP members and staff to help establish contacts. The European Commission's current spending plans for scientific research are running at £800m a year over the next three years and the paper gives details of some of the lesser-known features of its programme.

There are also separate budgets — linked to policy studies, which covers a wide range of disciplines; agriculture, related to the common agricultural policy; and relations with developing countries. Each of the commission's 20 directorates-general has a small budget for studies relevant to its separate administrative responsibilities, ranging from employment to fisheries. Individual contracts for this work, which may be worth £50,000 or more, again depend on personal contacts.

Moves to promote scientific co-operation in Europe are also in hand in both the European Commission and the Independent European Science Foundation. The commission has just set up a new committee for European development of science and technology to stimulate basic research in the European Community.

The committee's bureau, headed by the chemist Ilya Prigogine, and Hubert Curien, president of the European Science Foundation, has around £2m a year to spend, and has called for research proposals in pharmacology, solid state physics, optics and climatology.

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bits and pieces of the ACACE's projects can be best put out to tender. One of the most important is the unemployment scheme for which both the Further Education Unit and the NIACE will be contenders, although it is likely that the commissioning money will be expected in order to do the job properly.

No specific proposals have been made yet and the official DES line is that a range of options are still being looked at for replacing ACACE.

Off the record, MPs criticize secrecy

by Paul Flather

Academics and researchers have grave misgivings about the current system of rules governing the declassification and preservation of secret Whitehall files and clinical records.

Their views are contained in evidence and written memoranda to the Commons Select Committee on Education, Science, and Arts, which has just published the minutes of its inquiry into official public records policy.

The general election intervened before the committee was able to agree its final report but a confidential draft, produced by the former committee as chaired by Mr Christopher Price, is highly critical of current policy and methods.

For example the draft urges the Government to declassify far more material before the 30-year norm set under the 1967 Public Records Act. Under the 1958 Public Records Act early release is allowed with the agreement of both the Lord Chancellor and the minister involved.

The draft states that preoccupation with secrecy remains too great a concern of government and too great an

attraction for its practitioners. "We suspect that it costs a great deal of money to maintain, which could be better spent on better preservation of public records," it says.

The collected evidence from medical and historical researchers suggests four main reforms:

- A need for far greater supervision of public records to prevent excessive destruction and excessive retention;
- The creation of sector panels involving professional academics and historians to assess records in each department;
- Important Particular Instance Papers (PIPs) should be covered by a policy and retained. Clinical records should remain protected by the Public Records Acts.

Advisory sector panels were strongly urged by Sir Duncan Wilson in 1981 after an inquiry into public records, but were rejected as unnecessary. A White Paper published in 1982, Civil servants appearing before the select committee also said they would be too expensive.

Professor Margaret Gowing of Oxford University, who has had 41 years of experience with public records, was

for example very scathing of the official reply to the Wilson inquiry. She dismissed the idea that sector panels would cost too much as a false economy, pointing out in any case the cost of the present system of weeding records was unknown.

The main object of the panels would be to cement the liaison between the academic world and those keeping the records. In her view the Public Records Office lacked the feel of scholarship it brought to medieval documents when dealing with modern records.

She said sector panels were the only way to decide on PIPs, which can give historians a detailed view of how a problem was being seen by Government. "Records are the essential basis of the historical scholarship from which popular interest is served and the PRO is one of the richest archives in the world," she wrote in her memorandum.

Other statements were sent by the Royal Historical Society, the History Workshop collective, and the Society for the Study of Labour History which called for a proper public records service capable of responding flexibly and sensibly to the changing needs of

research workers. A host of evidence from medical researchers including the Society for the History of Medicine, the British Society for the History of Science, the Society of Genealogists, and the National Perinatal Epidemiology Unit at Oxford, is strongly critical of Government plans to remove clinical records from the Public Records Act.

Dr Charles Webster, an eminent medical historian and director of the Wellcome Unit for the history of medicine, at Oxford University, said vital historical records would be placed at risk by such a move. Records would no longer be subject to statutory guidelines for preservation, but to local administrative decisions made on a myriad of different criteria.

The new select committee once reconstituted will have to decide whether it wants to proceed with a report on public records, which the Government would be bound to respond to.

House of Commons education, science and arts committee session 1982/83, Public Records minutes of evidence and appendices, HMSO £9.15.

'Increase science intake'

by Olga Wojtas
Scottish Correspondent

The principal of Edinburgh University has called on the Government to give more funding to research and allow larger student intakes in the sciences.

Dr John Burnett, speaking at a science graduation ceremony, said the Government "very properly" saw the application of science as a means to improve material productivity and was increasingly intervening to direct activities in universities towards this goal.

Edinburgh had gained around 20 per cent from earmarked funding, £12m of research grants and contracts. But at the same time, Government funds to the research councils were inadequate to maintain their activities, fully or even to meet staff salaries. The numbers of well-qualified pupils willing to enter higher education were held in check in universities, even where there was spare capacity.

"If capital investment is necessary to produce industrial growth then it is equally the case in order to promote science and technology," he said.

In another graduation address, Dr Burnett made it clear that he did not wish to see scientific and other vocational courses dominating the universities to the detriment of other subjects. He criticized the "heavy and increasing pressure" on universities to relate their activities to the immediate needs of society or increase material productivity.

Dr Burnett said he would justify non-vocational courses not only because ultimately the use of the mind was the only creative tool people possessed, but because it could not too easily become clogged by the weight of knowledge or conventional wisdom, which was the bane of a specialist and vocational course.

Sir Alwyn Williams, principal of Glasgow University, spoke out in a graduation address against any inclination of a student voucher system. "It is shortsighted not to foresee the giving school-leavers effective financial control over universities will foster a nightmarish bureaucracy and a colossal funding which will militate against well planned teaching and research," he said.

Sir Alwyn warned that higher education was being assailed by so many recommendations, inquiries and legislative prescriptions calling for contradictory changes that it might well go through a phase of unproductive confusion. These latest assaults were even less well founded than the recent one in income and student numbers, he posed as great a threat.

Clearly referring to the recent Levene report, Sir Alwyn said some of the cries for change were insensitive to the objectives of higher education.

It was depressing to hear the call for a two-year degree when the growth of knowledge was exponential, when the most urgent problem facing the world was to find enough work for its growing populations, also formal study was a painful employment by any criterion.

But Professor Brian Morris, principal of St David's University College, Lampeter, came out in favour of vouchers when he addressed graduates at their degree ceremony.

"This is an excellent suggestion," he said. "So long as vouchers and other structures enhance a university's ability to teach its students and to advance knowledge by research, let us adopt them. But if they do not, away with them, let them be cast into outer darkness."

Professor Morris was less convinced about the second proposal that a small number of universities should receive global sums allowing them to decide individually how many students to take, what maintenance grant to give each student, as well as what fees to charge and what subjects to teach.

"A university does not exist to provide such trained manpower as one government thinks the nation needs, or as a recruiting centre for government and the professions," he said. "No government may dictate to a university what it shall teach or what areas of undiscovered knowledge it should explore."

Karen Gold reports from the Council of Local Education Authorities' conference in Canterbury

Partnerships formed and reaffirmed

The Council of Local Education Authorities launched its members into their 1983 conference with fraternal and unanimous agreement on partnership, not only among themselves but also with central government.

"Recognizing that effective partnership between central and local government is essential to a healthy education service" their first motion began reassuringly. "CLEA views with concern recent moves which have put that partnership under strain."

Continuing to balance support with criticism, the unanimously-passed motion which was proposed by Conservative-run Hampshire and seconded by Labour-run Wakefield, called on the Secretary of State for Education and Science "to seek to renew with local education authorities a cooperative and constructive relationship which recognizes the legitimate interests of both participants."

A similar guarded tone characterized their resolution on the National Advisory Body; another call on Sir Keith Joseph, this time to "demonstrate further his belief in the critical importance to the country's future of a strong, vigorous and responsive system of public sector higher education by persuading the Government to reexamine the priority it is prepared to give to higher education in public expenditure planning."

The resolution, which reiterated support for NAB but emphasized the need for realistic Government funding, was one of the most important before the conference, said its proposer, Mr John Permain, chairman of Wakefield Education Committee.

Maintaining access to higher education is vital not only for individual students but also for the national

Sharing problems and solutions

The problems of the education service are shared problems and the solutions must be shared too, Sir Keith Joseph, told the conference.

"That is why I shall be laying out, at the beginning of a new Parliament, a programme for action - an agenda for partnership," he said.

The proposals for education support grants to fund specific projects in local education authorities did not undermine that partnership, despite local authority concern about them which he understood, he said. They were "a limited shift, at the margin, in the balance of influence between local and central government."

Local authorities and government have to look again at teacher supply and at teacher training, both initial and in service, as the Cockcroft committee advised, he said. What is taught needs to be more applicable to the real world, and that affected the teacher training curriculum.

"I am now focusing on the content, relevance and quality of the training courses themselves. The Government has set out principles for improvement," he said.

MSC scheme 'a success'

The success of the Manpower Services Commission in identifying more than its target number of places for this year's Youth Training Scheme, and in finding extra places for the Technical and Vocational Education Initiative was presented to the conference by MSC chairman Mr David Young.

"This (YTE) is our scheme, designed by you in partnership with the Trades Union Congress and the Confederation of British Industry, carried out by partners in the Commission, and if we continue to work together it will not and indeed must not fail," he said.

But his announcement that the MSC had found extra money for a second round of YTE pilot schemes for 14-18 year olds was criticised by CLEA members who compared the MSC's apparent financial ease with the education service.

"You are in fact belying us if you are suggesting that we can work in partnership, because what we have seen in YTE is a real erosion of our powers and responsibilities," said Ms Ruth Gee, Inner London Education Authority.

Mr Young said he believed there should be a YTE pilot scheme in every local authority that wanted one. But he denied that the MSC had any role in schools, not that the MSC would remain involved in schools in the long term.

Temperatures rise over salary gap

by David Robbins

The widening salary gap between clinical and non-clinical academics in universities is expected to become a key element in next year's pay negotiations.

Leaders of the Association of University Teachers are to protest strongly to the vice chancellors at the way money can be found to pay the 3,000 clinicals an 8 per cent award when other academics were held back to only 4.6 per cent.

It is the second year running that the clinicals have been able to do better than other academics in salary awards. Last year they received the full National Health Service award of six per cent when other staff received five.

On both occasions ministers have been prepared to meet the greater proportion of the difference between the award and the cash limit to which university salaries have been subjected.

Dr Andrew Taylor, a vice president of the AUT and chairman of its salaries committee, said: "Undoubtedly a central issue in next year's salary negotiation will be the ridiculous and unacceptable gulf opening up between"

clinical academics and their other colleagues. "But we will not be waiting until next spring. The AUT will be protesting strongly right now."

The AUT is also critical of the vice chancellors' readiness to supplement the award from the universities' own coffers by 30 per cent, so they feel that the impact will be felt by other staff.

Mr John Akker, the AUT's deputy general secretary, said: "We are concerned this could have an effect not so much on the clinical staffing levels, but on pre-clinicals because the management structure is weighted towards the clinicals."

The 16 university medical schools have been left in no doubt they must bear the extra cost which is not being met by the Government.

Clinical salaries have always led the non-clinical ones. In 1981, for example, a medical school senior lecturer could earn £2,540 a year more than the non-clinical professorial average of £18,480.

In 1982 the gap widened because of the differential award to £2,865. From January 1984, when the full NHS award is payable, the difference will be

just under £4,000. The professorial average outside the medical schools will be £20,300 compared with the clinical senior lecturers' salaries of £24,260.

Part of the AUT leaders' anger stems from a belief that it is university research teams and not clinical academics who have led many of the medical breakthroughs.

Arrangements for implementing the two stage NHS award are being put into effect. No formal meeting is needed - it is being done by exchange of letter.

● The AUT has described plans for a private medical school in London as "offensive". Dr Paul MacLoughlin, a Harley Street fertility specialist, hopes to open a new school later this year using the premises of the former Royal Free Hospital Medical School, which would be open to mature students and to some candidates who had lower than normal academic qualifications but were well-suited to doctors in other ways. The AUT said this week: "While a levels as a criterion for admissions have their limitations, the AUT does not find the choice of an acceptable alternative."

Industrial threat to conferences

Universities' hopes of casting in on the lucrative summer conference trade are threatened by industrial action by porters, catering and security staff.

A plan for selective strikes put forward by the National Union of Public Employees was given the backing of the trade union side at the weekend.

It will be implemented if the university employers do not improve their pay offer of a flat rate £3.30 a week to all grades of manual workers which the two sides meet again next week. The talks follow the rejection by the unions of the management offer.

Mr Alistair Macrae, NUPES's national officer for universities, said: "This is a closed period for academics, technicians and the majority of university staff. But as far as our members are concerned they do not get the long break and in most universities are heavily involved in catering for and generally looking after the various summer schools and conferences which use university premises."

Although most degree ceremonies will have been held by the time any industrial action begins, those which have not will also be a target for action by manual workers. Catering could be disrupted, halls remain locked and chairs and tables not set up.

"Our members may demonstrate and quite possibly withdraw their cooperation with catering and security," Mr Macrae said.

Manual workers are expected to demonstrate at the vice chancellors' headquarters in London when negotiations are resumed.

One possible target of industrial action could be visits by royalty and other dignitaries. Prince Charles, chancellor of the University of Wales, is expected to visit one or other of the colleges in coming weeks.

In a six-week "cooling off" period in the National Union of Students' internal dispute over pay structure, officials of the independent Advisory, Conciliation and Arbitration Service are chairing meetings between the two sides.

Engineers lack that material feeling...

British engineering graduates have little feel for the materials they will have to use to realize their designs, and this is one reason behind our failure to improve manufactured products as fast as overseas competitors. This complaint comes from a working group from the Fellowship of Engineering in a report published yesterday.

The working party, which included Dr Tony Kelly, vice chancellor of Surrey University, Dr Robin Nicholson, the Cabinet Office chief scientist and influential industrialists, maintains that "it is possible for students to graduate in materials science, mechanical engineering and metallurgy with little or no direct experience of the wide range of available materials."

"Their report highlights the crucial importance of materials in innovation through a series of case studies chronicling British successes and failures in products as diverse as digital watches and aero-engines, tennis rackets and refrigerators. The lesson drawn is that the potential rewards from use of new materials are high. But if these rewards are to be realized, the report argues, engineers must be trained who have a flair with such materials and can champion new products within firms."

Dr Norman Waterman, a consultant to the working party who prepared the case studies, explained that engineering training now emphasized mathematical and analytical knowledge at the expense of the craft skills formerly acquired during industrial apprenticeships. "When I give guest lectures on materials, I find it increasingly difficult to get the students to relate them," he said. Other countries trained designers with closer knowledge of materials.

The fellowship's report was sponsored by the Department of Industry, and Dr Waterman said he hoped both bodies would take its recommendations further, perhaps in conjunction with the Engineering Council.

Modern Materials in Manufacturing Industry: Fellowship of Engineering, 2 Little Smith St, London SW1.



Senior students at the London Contemporary Dance School Tamsin Hickling and Mark Ashman present Chants, an original dance choreographed by third year student Kristin Gjens with music by Moondog. It made up part of the programme of the school's "A Choreographic Offering" every night last week.

Shake-up urged in computer training

Radical changes to set up national standards for and improve computing courses under the Manpower Services Commission are recommended in a report published this week.

The report, TOPS Computing Training is the first thorough review of such courses under which some 4,000 adults were trained in 1981/82 at a cost of £11.6m, mainly in commercial firms but also in 23 universities and colleges.

It was undertaken for the Manpower Services Commission by an industry-based study group. The commission felt that the lack of nationally recognized standards was hampering both trainers and employers and decreasing the effectiveness of courses and subsequent placement. This fell from 78 per cent in 1979 to 43 per cent in 1982.

The report wants training to concentrate on three main skills - programming, systems analysis and business computing - with support training in computers sales.

In order to establish national certified standards, the authors recommend that the MSC enter into discussion with the Business and Technician Education Council, City and Guilds and the National Computing Centre.

and socially disastrous, and must in addition lead to adverse economic results. The NAB said that the MSC's use of the phrase "training for work" seemed to assume "that employed and unemployed are synonymous with employable and unemployable."

The MSC's proposal that training should be locally managed through its own organization did not go far enough, said the AACB paper. A more effective local framework was needed.

Not the serious adult training point, but unless additional funding was available, the legal basis of adult education and arrangements for training while receiving state benefits were

Diverse interests divulge similar criticisms of MSC

A chorus of similar criticism from diverse bodies is currently arriving at the Manpower Services Commission in response to its discussion document Towards an Adult Training Strategy.

The critics are all leading bodies involved in adult education and training. They argue that both the two fundamental planks of the MSC's proposed strategy - its leadership role in adult training and its analysis of the role of training in the economy - are wrong.

The deadline for comments on the document, which was published in April, was last week. The commission will spend the summer sifting over

reactions before issuing a policy in the autumn.

The National Advisory Body views the MSC's claim to lead in creating a framework for other groups to operate adult education and training "with serious concern."

The MSC had undervalued and made little mention of the training already taking place within the higher, further and adult education systems both in this country and abroad, said the NAB response.

The National Institute of Adult and Continuing Education, the Advisory Council on Adult and Continuing Education, and the Adult Education Teachers' Union, the Association of

Group judges effect of nuclear blast

by Jon Turney
Science Correspondent

A group of lecturers at Manchester University has published a city council-backed pamphlet describing the effects of a nuclear attack.

The pamphlet questions the point of current Government civil defence policies and is the fruit of the group's response to an earlier document distributed by the Greater Manchester Council.

Dr Philip Gummot of the Manchester University staff nuclear disarmament group said they had been dismayed by the earlier council publication, which painted an over-optimistic picture of the prospects for survival after nuclear attack. The group, which began simply as a discussion group for "interested academics, was invited to write its new pamphlet after meeting the council's ruling Labour group two years ago.

The group stresses that it has no formal connection with the university, but most members of the civil defence working group have academic interests in defence issues. Dr Gummot, who lectures on arms control in the department of liberal studies in science - just rechristened the department of science and technology policy - said he had started to examine official figures on effects of nuclear weapons with an open mind for undergraduate lecturers.

But after two years working with the group, he felt no one need be surprised that the pamphlet figures conflicted with Government estimates. "The industrial case, against Home Office survival estimates is now generally accepted," he maintained. He felt that the survival measured by official figures had no real meaning, as the estimates were only concerned with the very short terms.

Ironically, the group's pamphlet appears the week after the British Medical Association reacted angrily to Home Office allegations that the BMA's study group on the effects of nuclear weapons had been unduly influenced by disarmament propaganda. Mr Young said he believed there should be a YTE pilot scheme in every local authority that wanted one. But he denied that the MSC had any role in schools, not that the MSC would remain involved in schools in the long term.

The money from the MSC was received with scepticism by authorities participating in YTE said Mrs Nikki Harrison, Haringey and vice chairman of CLEA. "I would have thought that 14 schemes are enough to learn by."

She also warned him about the MSC's latest consultative document suggesting it should take a leadership role in adult education. "Keep your hands off the adult education service," she said. "The latest report you have published has been received with enormous anger."

But Mr Young said that adult education was not a new interest for the MSC.



Overseas connexions 'vital'

The presence of overseas students was important if Britain was to continue to have influence in foreign affairs, Lord Carrington, former Secretary of State for Foreign and Commonwealth Affairs, said last week.

Lord Carrington was speaking at Exeter University, where he received an honorary PhD from Sir Patrick Nairne, its new chancellor.

He told the congregation: "I believe that the presence of overseas students at our universities is important to us because if we are to have some influence in foreign affairs - and I hope and pray we shall continue to do so - then it is necessary for those in high places in other countries to have some knowledge of what goes on in this country, in our society and the strengths and weaknesses of our national lives."

Referring to the withdrawal of subsidies for overseas students Lord Carrington said: "It is perfectly true that the expenditure got rather out of hand and was costing the British taxpayer something over £100m a year. Nevertheless I regret that it was necessary to do it so abruptly or to withdraw it so completely. I am happy that the Government has now decided to set aside a substantial sum of money to redress the balance."

Lord Carrington added: "And when the students become the capitalists of industry, the politicians, the scientists, they will look to Britain (for it is Britain they know best) to provide them with the help and the goods and the equipment and the technical skills required for the development of their country. Mutual interest, mutual self-interest, is not a bad way to conduct the world's affairs."

THE TIMES SUPPLEMENTS REPRINT SERVICE Robbins to Leverhulme

The Leverhulme programme of study into the future of higher education was organised by the Society for Research into Higher Education with a grant from the Leverhulme Trust and further grants were made by the Gulbenkian Foundation and the Department of Education and Science. The programme consisted of eight seminars the first in April 1981 and the last in September 1982.

An edited four-page version of the final report is now available in reprint form (first published in The Times Higher Education Supplement on 27th May, 1983) price 25p.

Inquiries should be addressed to Frances Goddard, The Times Supplements, Priory House, St John's Lane, London EC1M 4BX. Cheques/postal orders should be made payable to Times Newspapers Limited (no cash please).

Overseas news

France's lecturers angered by shorter holidays plan

from Guy Neave

PARIS
Proposals modifying conditions of service for France's 43,000 dons have run into heated opposition from the two main lecturers' unions, the Syndicat National de l'Enseignement Supérieur and the more moderate Syndicat Général de l'Enseignement National.

The most controversial proposal is the extension of the academic year by seven weeks and a corresponding increase in the teaching load.

In a dramatic gesture, the Syndicat National resigned en bloc from the Comité Technique Paritaire, the main

negotiation forum between government, university administration and academics on questions of conditions of service. Not to be outdone, the Syndicat Général boycotted the meeting of the committee on July 11.

The director general for higher education, M. Jean Jacques Payen found himself in the embarrassing situation of having to abandon the meeting for lack of numbers.

The unions' message to the government is clear. Attempts to force through this controversial legislation during the summer recess will meet with all-out resistance. The uproar is not directed

against proposals to restructure the academic profession - this is something the unions are becoming rapidly resigned to.

The real cause of discontentment is the extension of the university year and the fact that it can be implemented very quickly. If the government has its way, it could become effective from the start of the coming academic year.

Despite the winding down of the summer recess, some 60 members of staff from the University of Lille have gone on record as telling the minister of education, M. Alain Savary, that they will not obey any instructions to prolong

the next university year.

The next meeting of the negotiating committee has been fixed for later in the month. But there is every likelihood that, if he persists in this vein, the only support the director general for higher education will get will be from his own civil servants. More importantly, he risks alienating a body which has traditionally been left loosed.

Given the difficulties still to be faced in the passing of the higher education guideline bill, both M. Payen and M. Savary need all the support they can get.

Reagan gets tough with racist states

from E. Patrick McQuaid

WASHINGTON
The Reagan Government has filed suit against the state of Alabama and notified five other southern states that they are failing to uphold federal civil rights statutes at their public college and universities.

Civil action filed in the federal court at Birmingham. The Alabama capital, charges that the state has "maintained and perpetuated a dual system of public higher education based on race". The suit contends that qualified black candidates have been denied admission to traditionally all-white institutions, been largely excluded from the teaching staffs, administrative and governing boards, and from the supplementary staffs solely on the basis of race. Black students at all levels are routinely not given the same opportunities as whites in public education, said the government action.

The government's assistant attorney general in charge of civil rights enforcement, Mr. William Reynolds, said the legal action came after more than a year of negotiation with the state.

The justice department, he said, "does not intend to discourage further negotiations" in its decision to take the matter to court and will seek resolution, hopefully "short of full-blown litigation".

While civil libertarians applaud the action they also see it as part of a larger campaign orchestrated by the White House to demonstrate President Reagan's commitment to equality in the face of a recent wave of severe criticism from minority groups and his rival party, the Democrats. After Mr. Reagan announced his decision to replace three members of the US Commission on Civil Rights, a number of influential minority groups and

associations vowed they would work to unseat him in next year's national election.

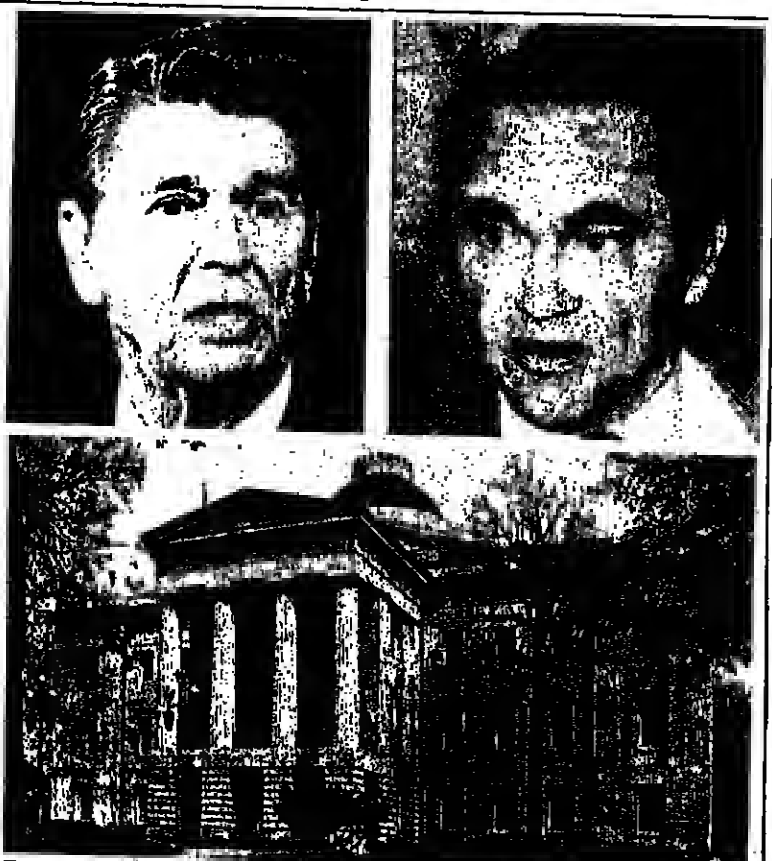
Reportedly the attorney general, Mr. William French Smith, has instructed his deputies to file similar actions against two other states, as yet unnamed.

Elsewhere, the department of education's office for civil rights has rejected the college desegregation plans submitted by Arkansas, Florida, Georgia, Oklahoma, and North Carolina. Agency attorneys notified the states that they have until August 15 to draft acceptable terms or face sanctions which could result in the termination of federal education funds. Several states have been under court order to submit plans for college desegregation by the end of June with strict enforcement proceedings to commence by September 15.

The states outlined their individual desegregation plans in 1978 and are accused of having "defaulted in major respects on plan commitments and on the desegregation requirements" spelled out in the 1964 Civil Rights Act.

The education agency has been reviewing plans, noting that most contain sound features but need additional work. The case with North Carolina, for example, concerns only the two-year college system. A desegregation plan for that state's four-year institutions has already been approved.

This is what makes the Alabama action so extraordinary. In the North Carolina case, longstanding litigation was settled when the government bypassed the attorneys handling the affair and accepted state proposals that were labelled "significantly worse" than plans forwarded and refused by the previous government under Jimmy Carter.



Right row: President Reagan (top left), Governor George Wallace of Alabama, North Carolina state legislature.

The suit charges state authorities, including its controversial governor, Mr. George Wallace, with failing to eliminate "the vestiges of a dual system".

The action also claims that Alabama has provided greater material and financial resources to various agricultural programmes at historically white institutions than to colleges where blacks are the bulk of the student body. It specifically charges that the state purposefully created a dual system, discriminating on the basis of race,

when it established a branch of the traditionally white state university in the same area served by a traditionally black agricultural and mechanical arts college.

It is anyone's guess what will happen next. In Georgia, where the department of education has criticized a reading and composition exam all students must pass before receiving a college degree, state officials said they had no intention of amending that part of their plan.

Pensions must be equal

from Janet Hook

WASHINGTON

The US Supreme Court has ruled that employers must pay equal pension benefits to men and women. This decision could force major changes in retirement plans offered to faculty members at thousands of schools and colleges.

Ruling in one of the most controversial sex discrimination cases this year, the court said that a federal civil rights law prohibits employers from sponsoring life annuity plans that pay lower monthly benefits to women than men after they retire.

Payment of higher monthly benefits to men has been a common practice under many pension plans provided by employers - including the more than 3,500 colleges and schools that participate in plans offered by the Teachers Insurance and Annuity Association and the College Retirement Equities Fund. More than 80 per cent of all private four-year colleges and universities and about 90 per cent of all public institutions of higher education participate in these.

Several sex discrimination lawsuits involving university annuity plans now will have to be settled.

A widespread insurance-industry practice calculates payments on the basis of life expectancy tables. Because women, on average, live longer than men and thus are expected to collect benefits over a longer period, monthly payments to women have been lower.

Women's rights groups including the American Association of University Women have criticized the practice, saying it unfairly penalizes the many women who do not outlive their male counterparts.

The Supreme Court held that sex-differentiated pension plans, when offered by employers, violated Title VII of the Civil Rights Act of 1964. That law prohibits discrimination on the basis of sex, race, religion, or national origin in employment practices - including the provision of fringe benefits.

"An individual woman may not be paid lower monthly benefits simply because women as a class live longer than men," Justice Thurgood Marshall wrote in the Court's majority opinion. "Title VII requires employers to treat their employees as individuals."

The case before the Supreme Court challenged a voluntary retirement plan that had been offered to employees of the Arizona state government. But similar suits charging sex bias in TIAA-CREF plans at Long Island University and Wayne State University had also been taken to the Supreme Court.

The justices now have ordered two lower federal courts to reconsider the university cases, and to resolve them in light of the principles set out in the Arizona decision.

Sex discrimination in pensions has also been the subject of heated debate in Congress. Legislation has been introduced in both the Senate and the House of Representatives that would bar sex bias in all forms of insurance and pensions.

The legislation has met with fierce opposition from representatives of the insurance industry.

In a major concession to the insurance companies the court said its ruling would not apply retrospectively.

In an early decision, the Supreme Court ruled on the question of whether another provision of the Civil Rights Act required individuals who allege racial bias to prove that the discrimination was intentional or whether they need only prove that the effect of a practice, such as a test employees must take to be hired or promoted, was racially discriminatory.

In a complex and fragmented decision, the court ruled that proof of intentional bias was not required under Title VII of the Civil Rights Act, which bars racial discrimination in courses including those at education institutions that receive financial support from the federal government. However, the court also said that substantial compensation for victims of discrimination, such as back pay, could not be awarded unless it were shown that the bias was intentional.

Volunteers run radiation risk

from Geoff Maslen

MELBOURNE

Melbourne volunteers who took part in an experiment at Monash University received excessive amounts of radioactive isotope, iodine-131, according to a university report.

International statistics indicate that people carrying excessive amounts of iodine 131 can be at a greater risk of developing thyroid cancer.

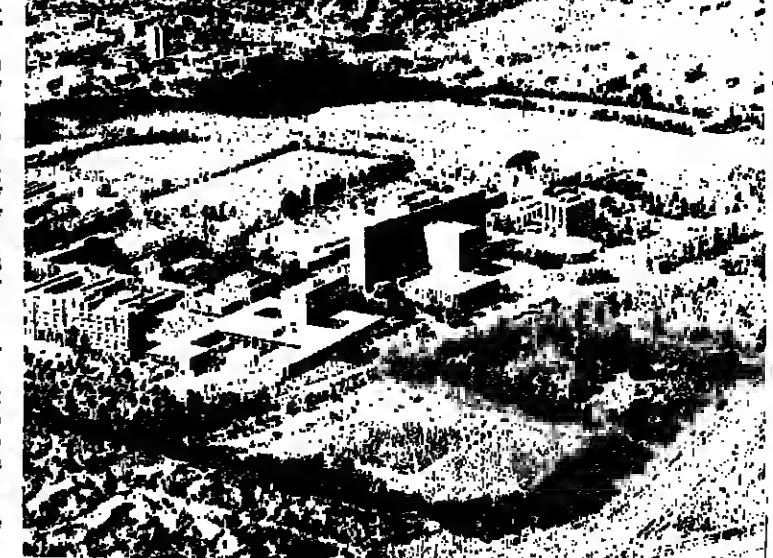
The report states that 46 volunteers received up to 10 times the proper dosage of the radioactive chemical. As a result, three researchers have been banned from conducting further radioactive experiments.

The research, into first aid treatment of snakebites, was carried out with 116 volunteers aged from adolescence to middle age. Dosage to the sensitive thyroid gland averaged about 60 rads for 46 of the volunteers, compared with the recommended level of exposure of 30 rads a year for workers in radioactive industries and three rads a year for the general public.

In one instance, according to data provided by Monash, a volunteer in the experiments may have been exposed over two years to a radiation dose to the thyroid of 240 rads - eight times the annual exposure recommended for workers in radioactive industries.

Many volunteers learned of the experiments through advertisements placed through bushwalking and first aid groups. Two thirds of those involved were students from Monash and the rest were drawn from outside groups. Most were paid about A\$18 to take part in the experiment.

The project involved using different mock snake venom whose action in the body was traced by radioactive iodine isotopes, including iodine 131. But a malfunction occurred in electronic monitoring equipment used to measure the amount of radioactive iodine



Monash University where three researchers have been banned from further radioactive experiments

administered to some of the volunteers. The experiments were abandoned when the malfunction was discovered.

The vice chancellor of Monash University, Professor Ray Martin, said the university took an extremely serious view of the matter. But he said the amount of radioactive iodine taken up by the thyroids of the volunteers were very small. "They were, in fact, smaller than occurs in the routine medical diagnostic procedure which uses iodine 131 to measure thyroid uptake in patients," he said.

Professor Martin said the university had arranged for the volunteers to have medical consultations with medical specialists and that a review of the practices currently followed in the approval of experiments involving irradiation of human subjects would also be undertaken.

Monash students, however, were critical of the university's reaction to the mistake. A spokesman for the students' association said students were not satisfied with the information provided by the authorities.

The association had had extreme difficulty getting any information from the university about the accident. Of particular concern was why the university waited from late last year, when it became aware of the accident, to May this year before volunteers were first notified about the mishap.

The Victorian government has also indicated disquiet over the report. The minister for health said officials in his department were unhappy with the report and had asked for more details.

Students split over new bill

from Mark Gerson

MONTREAL

Quebec student federations are split over a bill guaranteeing college and university students the right to legally recognized campus associations. The bill, the first of its kind in Canada, would create formal accreditation and financing mechanisms that could be used by student associations unable to reach independent agreement with their institutions' administrations.

Two of the province's three major student federations have welcomed the legislative framework, but the third rejects what it considers unnecessary government intervention. It would prefer that the government simply force institutions to collect dues from all students and believe that the proposed law could open the door to competing student associations on a sloga campus.

According to the bill, a college or university would be required to collect dues from all students on behalf of an accredited association. An association would have to be incorporated and supported by a majority of students in a secret ballot in order to receive the accreditation that would entitle it to office space, student lists and other institutional resources.

Earlier this year, more than 50 courses were "temporarily" closed or suspended, ostensibly in connection with the economic crisis. Teacher-training colleges were particularly badly hit, suggesting that the cuts were at least partially related to the process of political "verification", which was being imposed particularly rigorously in sectors liable to affect the upbringing of the next generation.

There are strong rumours in Poland that a new round of "verification" is

Polish Cabinet threatens universities with closure

Polish universities face a threat of closure during the next five years, if the relevant "didactic scientific research and personnel conditions" are not satisfied.

A recent cabinet meeting chaired by the deputy premier, Mieczyslaw Rakowski, who, until mid-July, was employed as editor of the weekly *Polityka*, a somewhat undesired reputation as a liberal, discussed plans for a large-scale evaluation of the country's 90 universities and other higher educational establishments.

A considerable number of cut-backs and amalgamations were implied. In particular, there are plans to reduce the research programme of the universities, on the grounds that "a teacher's main duty is to teach".

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There are strong rumours in Poland that a new round of "verification" is

Special panel backs graduate's dismissal

from Charlotte Beyers

PALO ALTO

A special panel of three scholars has decided that Stanford PhD candidate in anthropology, Steven W. Mosher, deserved to be dismissed from the department.

The committee found that Mr. Mosher, who was working in a rural Chinese village, showed unethical conduct. He was guilty of a "deliberate disregard for the law of China," and a "manipulative approach towards the people with whom he was living and working".

He was also accused of a "serious lack of candour in his contacts with his professors."

To arrive at the decision that Mr. Mosher's conduct was incompatible with being an anthropologist, the panel studied a secret 47-page report which contained the charges and the evidence.

Disclosure of the exact nature of the charges would be inadvisable," said Professor Clifford Barnett, chairman of the anthropology department.

Members of the special panel are: historian Gordon Wright and psychologist Ernest Hilgard from Stanford, and Ward Goodenough, professor of anthropology at the University of Pennsylvania.

To a telephone interview with a San Francisco newspaper, the 34-year-old graduate student said he plans to appeal against the decision and to take legal action if necessary to receive his degree.

Mr Mosher says he was dismissed



Steven Mosher; planning to appeal

because Stanford acquiesced to pressure from the Chinese government.

The student drew international attention by publishing an article in the Taiwan Press explaining China's barbaric birth-control practices in their communes. Photos showing women being aborted during the last stages of pregnancy accompanied the article.

The women's faces were not protected. Mr Mosher says that since the article appeared, the Chinese have begun to reform their birth control practices.

Educationists called to honour

Eight prominent educationists were named as officers of the French Legion d'Honneur in the government *Journal Officiel* published on July 5. They are: Inspector General Jacques Champomand; Alfred Jost, professor at the Collège de France; Alime Lanco, deputy director of the college; Jean Mourat, honorary professor; Philippe Ozouf,

professor at the University of Clermont-Ferrand; André Perrin, provost of the Lycée Pasteur at Noully-sur-Seine; Jacques Thill, Inspector General; Lucien Vernet, attaché at the academic administration.

A further 29 were awarded the Legion d'Honneur at the grade of chevalier.

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Research gets more cash

from Mark Gerson

MONTREAL

The Canadian government has announced additional funding for two of the country's research support agencies, exempting them from its controversial spending restraint programme.

The Natural Sciences and Engineering Research Council will receive \$2.5m for fiscal 1983/84, an 18 per cent increase over the \$2.1m it was granted in 1982/83. The Medical Research Council is to get \$13.7m or 16 per cent increase over last year's \$10.9m.

Earlier this spring, the two councils were told that their funding would rise between 6 and 7 per cent. In keeping with federal guidelines that limit public sector spending increases to 6 per cent in 1983/84 and 5 per cent in 1984/85, they have now been assured that additional funding will also be available during the second year of the restraint programme.

The Natural Sciences and Engineering Research Council plans to use this year's last-minute budget to restore the inflation allowance to existing research grants and scholarships and to award more strategic and equipment grants and postgraduate scholarships.

The Social Sciences and Humanities Research Council is now the only granting agency not promised extra money for the current year. Its 1983/84 budget allocation is nearly \$60m, a 5.5 per cent increase over last year.

Mexican university strike ends in rancour

from Emil Zubryn

CUERNAVACA

The 28-day strike mounted by the National University of Mexico Workers Union (STUNAM), the Metropolitan Autonomous University (UAM) in Mexico City and 10 other provincial universities, has ended on a discordant note.

Respective university unions won no pay increases and will only receive half their back pay for the duration of the walkout.

Earlier in the dispute authorities at the National University of Mexico (UNAM) had offered a token 1,700 pesos (£7.60) a month blanket wage increase, but this was subsequently retracted when the university admitted it was virtually broke and had no possibility of obtaining additional government funds.

Only around 20 per cent of the university's faculty and students re-

turned to the campus after the end of the frustrated walkout. Diehard strikers launched a silent march protesting against government pressure exerted against university unions.

The disorder and growing anger caused a renewed suspension of classes at the Metropolitan University where, movement against government and university authorities in support of the institution's labour union. Again demands are being made for payment of full salaries lost by striking workers, a readjustment of the school calendar and additional subsidies for research and teaching.

The general discontent is ominous and may cause further trouble for the Mexican Workers' Confederation of out that the government used illegal pressure to end the strike.

Amnesty fails to free detained students and lecturers

Political prisoners in Kenya claim that despite considerable international pressure no one detained without trial has yet been released.

Both the university and its associated teacher training college remain closed and unlikely to reopen before elections scheduled for the autumn. A committee of inquiry into the university has reported to President Moi, but its findings have not been published.

An article in the latest edition of the magazine *Index on Censorship* says that the future of the university re-

mained in doubt and claims that academic freedom is regarded as sedition.

Although 61 students were released in February as a result of "presidential clemency", a number of students and lecturers remain in prison. Six students have been sentenced to five or six years imprisonment for sedition. Mr. Malwa Kinyatti, a senior lecturer, who received six years and has since had an appeal dismissed.

Workers and their leaders are also disgruntled by the rejection of what they termed "just" demands, especially since the government, in recent weeks has granted rises of from 10.5 to 15 and 20 per cent to employees of state-owned firms and federal employees.

Nothing but dry calculators and drudges

Douglas Bethlehem sets out the task facing a truly scientific social psychology

Making a sincere attempt at a scientific social psychology can really be very bewildering, and unusually dispiriting. One is faced with an entangled public opinion, and on the right by one's colleagues in biological psychology and on the left by that huge majority of social "scientists" who cannot be bothered with science. Public opinion, when it is roused, looks in its intelligence about social science and social psychology. Are not social psychologists in contemporary literature, pitiful and contemptible figures? Do not social psychologists—I heard it said—only the other day on Radio 4—spend an enormous amount of time and (not) money in discovering truths that can be heard any day "the saloon bar"?

What, I wonder, would public opinion have made of seventeenth century science and scientists? At the time when science was taking its modern, quantum leaps, of course, public opinion was not financing their squabbles, so science remained a fairly private matter. Newton's prose, at once around and blunt, napsins his rival, Hooke, when the latter seeks to claim precedence in the "invention of the rule of the decrease of Gravity, being reciprocally as the squares of the distances from the Center".

"...is plain by his words he knew not how to go about it. Now is not this very fine? Mathematicians that find out, settle and do all the business must content themselves with being nothing but dry calculators and drudges and another that does nothing but pretend and grasp at all things much carry away all the invention..." And no one can forget his belatedly regal assertion *hypotheses non fingo*, a frequently repeated denigration of the contemptible practice of "fudging hypotheses". The point is that Newton was a dry calculator and drudge — and much more — he did "fudge hypotheses".

He made this last assertion about the practice of his Cartesian critics and detractors of inventing *ad hoc* hypothetical entities in order to explain all movement by mechanical causes — that is, by trying physically pushing around Descartes' philosophy consisted of structural speculations about a fluid, controlled by valves in the brain;

moving through tubular nerves to move the limbs hydraulically and his physics of structural speculations about vortices in the ether pushing planets and objects on them this way and that. These speculations were invented simply to provide a mechanical explanation for physical movement: they do not even present for the real test of science, being able to predict.

To Descartes' great contemporary, Galileo, we owe the foundation (in modern science) of mathematical-empirical study. While he was no experimentalist — stories about his dropping weights from the leaning tower of Pisa are apocryphal — he was a great observer, developing a greatly improved telescope. Even more important he saw the importance of mathematics in making models of physical phenomena. He, of course, thought of his models as descriptions.

The majority of Newton's scientific contemporaries sought to belittle and ignore his work as long as they could

And he had the faith: in a celebrated passage he began, "Philosophy is written in this grand book, the universe, which it is our business to read like a self-consciously scientific investigator would today. That is, he derived a different implication from each theory about what would follow a set of operations — passing light through two prisms to this case. The consequence predicted by Newton's theory was observed, not the one predicted by Hooke's, and Hooke's theory was therefore rejected.

Logicians and philosophers of science will recognise the form of this argument as *tollendo tollens*. Newton was clear that he was formulating hypotheses and making observations to corroborate or modify them. He saw clearly that framing hypotheses was only the first step in science. His contribution in the area was not to invent an occult force of gravity — he was always anxious about the ontological status of the construct — but in showing by rigorous mathematics that

we have completed on the management of pension schemes. We focused specifically on the part played by employee representatives, carrying out two large-scale surveys and a number of case studies (of which the scheme was not one).

We looked at three types of pension information: relating to the individual's own benefit position, to the scheme's administration and to the fund's investment. People are naturally most concerned with the first of these, but the level of interest expressed in the second and third was also high. What is particularly striking is the variation between schemes in the generosity of their distribution of information.

Over 90 per cent of the organizations surveyed make an explanatory booklet automatically available and just over two thirds regularly provide an individual benefit statement. Some items of information are usually provided only on request. The trust deed, for example, can generally be had by those with a particular taste for legal bureaucracy; although it may on occasion be crucially important in defining the powers of the trustees, it would be a waste of money to distribute it generally.

It is not uncommon for financial details of the fund's assets to be unavailable even on request. This may seem surprising, given that pensioners are increasingly accepted as deferred wages and therefore in principle belonging to the scheme members, but about a third of the schemes do not provide any breakdown of their investment.



ling the physical world and deriving predictions from his theories and tested deductions from these models and predictions. When he roared against the fudging of hypotheses he meant (when he was not calling the phrase up as a term of common abuse) that science could not proceed by making assumptions about the existence of hypothetically real things — like vortices in ether — in order to explain reality in accordance with preconceptions.

The important difference between his theories in physics and those, for instance, of Descartes, is that Newton's theories are able both to explain and to predict the phenomena they deal with. The modern cast of Newton's science is everywhere apparent. He pitted his theory of colours against the one upheld by Hooke in a way which a self-consciously scientific investigator would today. That is, he derived a different implication from each theory about what would follow a set of operations — passing light through two prisms to this case. The consequence predicted by Newton's theory was observed, not the one predicted by Hooke's, and Hooke's theory was therefore rejected.

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Neither of us is nudging retirement age yet (though the discrimination which exists against certain researchers has added a few grey hairs). Our interest in pensions and the past booklet stems from a research project

his suppositions had certain implications and by empirical observation that these implications did actually hold and thus corroborated the theory.

With this background, two questions may occur to the reader. First why is a social psychologist writing about physics, not biological science? Surely if psychology has any claim at all to being a science — which almost everyone, including most social psychologists, prefers to doubt — it is a claim to being a biological, not a physical science. Second, what are the parallels between the seventeenth century science in the physical sciences and the twentieth century social psychology science?

Social psychology is faced with an enormous range of phenomena, which we do not yet know how to name and group or classify. Thus it was with physics in the seventeenth century: it was only Newton's theory that leads us to think of all forms of attraction between bodies, outside magnetism, as falling into the class "gravitation". It was not clear in Newton's time whether force was best considered to reside in bodies, or whether it was something that happened to them from outside. It is due to Newton's theorizing that the question itself seems ridiculous today.

Some people find the converse equally difficult to come to terms with. Newton invented abstract hypotheses to explain the phenomena to which he was addressing himself, and used abstract mathematics. The point is that concepts like gravity, laws like that of inertia, are not given, they are there to be discovered. Newton's genius was the invention of theories that allow us to perceive an order in physical phenomena. It cannot be taken for granted that physics has no easy subject matter

through computerization, to provide an annual statement of the precise benefits which have accrued to a point of time — lump sum entitlement, prospective pension, etc. University staff receive no such regular statement.

Again, maybe academics are more careless than other categories of employee about their future. But the lack of information is all the more striking since the university scheme has no member trustees on its management committee. Our research shows that where there is employee representation at this level the automatic provision of individual benefit statements rises to nearly 80 per cent. Indeed, this — the dissemination of information — is where employee participation has its main impact.

The universal scheme is not exceptionally miserly in its approach to the distribution of information. But we suggest that three factors will greatly increase the pressure on it to be more positive in its policy.

First, most people will want to know where they stand as individuals. This is especially true of people who leave the scheme, and even more so of those (primarily contract researchers) who leave before completing five years' service and automatically forfeit the right to participate in the scheme. This is a major reason for the scheme's popularity.

Second, the negotiating partners will be forced to take a more direct interest in the scheme's funding position. Occupational pension payments are now a very significant factor in many

and social psychology a difficult one. Physical phenomena did not look easy, organized, or homogeneous, in Newton's time.

Social psychology is faced with problems similar to those of early physics, but biological science, in the main, is not. In social psychology we are faced with an enormous range of phenomena which are roughly "social", without a ready-made way of knowing how to start theorizing, what goes with what, or in what form to cast our theories — just as in 1660 it was not clear whether "gravity" was just one power or many (or none), or whether force was something in objects. In biology phenomena are by and large acceptably classified, certain methods and theories are accepted and research is often a matter of exploring and elucidating relations to terms already in use.

Social psychology is not in that fortunate state.

Freud may be psychology's Descartes, a brilliant author of a glittering theoretical import, but he has no real scientific import. Social psychologists often seem to distrust rigorous thought and mathematics. One is reminded of a remark made by the author of the recent definitive biography of Newton, Richard Westfall, by a Cambridge student, loftily dismissing one of the greatest intellectuals the world has seen: "There goes a man that writ a book that neither he or anybody else understands."

Social psychology needs to attend closely to what Newton called the "Rules of Reasoning in Philosophy" — the philosophy of science, in modern terms. It needs to borrow some of Galileo's faith in mathematics. It needs to frame explicit hypotheses, explicit axioms, explicit propositions, so that observations and experiments may bring to our attention phenomena "by which" (to quote Newton's words) "they may either be made more accurate, or liable to exceptions".

We in social psychology may not have had a Newton, but we have had our share of able men and women. In the 1920s and 1930s, for instance, L. L. Thurstone made a fundamental contribution to applied and mathematical psychology with his theory of attitude measurement. Students graduate today without even seeing the need to understand it.

In our universities, education, or Education, is an *op-phenomenon*. We ask our students to learn the language of the minutiae of the language of *Beowulf*, of the proofs of mathematical theorems, or arguments about the relation of body and mind, and education occurs. Paradoxically, if we try self-consciously to educate our students, we will fail. The paradox facing social psychology is similar. Only by containing ourselves with being dry calculators and drudges will we ever be anything more.

The author is lecturer in psychology at the University of Leeds.

Straight talking beyond the fringe

How do university staff fare? On the whole, they do not seem to be well off. They get the explanatory booklet, but that is the only item distributed directly and automatically — and as the latest offering in the first reprint for eight years. Single copies of the annual report and accounts and of the trust deed are lodged with local Association of University Teachers offices, where members may consult them.

The presentation of the accounts is unlikely to win the Golden Pen award presented annually by the National Association of Pension Funds to the organization which lays out the information most suitably — and this is the case with the University of Leeds. In order to achieve some movement on the dissemination of information, the AUP has been prepared to produce and circulate a pension scheme information leaflet.

On individual benefits, there is a leaflet. Many schemes are now able

through computerization, to provide an annual statement of the precise benefits which have accrued to a point of time — lump sum entitlement, prospective pension, etc. University staff receive no such regular statement.

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Second, the negotiating partners will be forced to take a more direct interest in the scheme's funding position. Occupational pension payments are now a very significant factor in many

organizational costs, and will play an increasingly large role in negotiations. This year has already seen the firm threaten industrial action over increased employee contributions and police pay also affected. University staff may in the future find themselves experiencing similar problems of these public sector colleagues. The universities have been obliged to step up their contributions to the fund. Although so far the extra resources have come from central government, it is not at all unlikely that the level of both sides' contributions will be brought into future negotiations, with pay and other benefits being traded against pensions.

Third, the use of the fund will attract closer attention from members, the pensions industry and from politicians of all sorts. Investment overseas is the issue that has generated most publicity, but it is the broader question of the general criteria for investment which is likely to dominate the debate in the future. The university scheme, being among the biggest of the funds, will attract its share of the calls for accountability. There will in all likelihood be very differing interpretations of what "accountability" means in this context. They would all agree on information as a key component of it.

Tom Schuller
Jeff Hyman

The authors are research director and research fellow at the Centre for Research in Industrial Democracy and Participation at the University of Glasgow.

by Peter Hamilton

Love and Power in the Peasant Family: rural France in the nineteenth century by Martine Segalen translated by Sarah Matthews Blackwell, £15.00 ISBN 0 631 12626 0

Any visit to Paris should include a trip out on the Metro to the Bois de Boulogne. Get off at Sablons and walk towards the Bois. On its edge, nearly in among the plush houses and apartment blocks of Neuilly you will find the Musée des Arts et Traditions Populaires — more commonly known as the ATP. A modern glossy building, it sits appropriately on the fringes of the Jardin d'Acclimatation, the genteel Parisian cross between the late-lamented Battersea Funfair, and a playground. For those who are interested in the rich culture of rural France, the ATP is designed to delight.

But the ATP is not just a museum. It is also the organizational and symbolic headquarters of French domestic ethnography, where research teams from the Centre National des Recherches Scientifiques (CNRS) are engaged in the collection and interpretation of the incredible variety of cultural artefacts produced by France's peasant populations. It contains the work of such notable figures as van Gennep, (1873-1957) whose *Manuel de Folklore Français Contemporain* (1943-1958) symbolizes the crossroads between the amateur "folklorism" of the nineteenth century and modern French ethnography, and who was instrumental in the formation of the ATP in 1937. Van Gennep's rigorous classification of ethnographic artefacts based on the insights into peasant ritual and customs summarized in his famous book *Rites de Passage* (1909) forms the basis of much modern French ethnography, and indeed its principles are still evident in the systematic presentation of the articles displayed in the ATP.

Van Gennep moved beyond the purely empirical collection of folkloric objects which had been the aim of men like Paul Schliet, whose massive *Folklore de France* (1904-7) attested to the fervent interest in "collecting" the culture of what was thought at the end of the nineteenth century to be a rapidly disappearing traditional world. Much of this material is housed at the ATP. Van Gennep's *Rites de Passage* formed the turning point in the progression of ethnography from pastime to systematic science.

Martine Segalen's work is situated in the mainstream of French historical ethnography. Chargée de Recherches at CNRS/ATP, her research has been mainly concerned with the family, matrimonial strategies and the status of women in traditional rural society.

The role, status, authority and sexuality of peasant women in traditional French rural society were not well documented hitherto, for the peasant family has only with reluctance given up its secrets to the ethnographer, sociologist or historian. There are few examples of peasants recording what their lives were like, and until Mme Segalen's work (contained in an impressive series of publications over the last dozen years, and including a major exhibition at the ATP in 1973 on *Huband and Wife in Traditional Rural France*) the area of sexual and emotional relations was largely left to one side for lack of information. What Martine Segalen has done in a number of publications, on the choice of marriage partners, in upper Normandy, on marriage, love and women in French popular proverbs, and on the rituals and customs surrounding stages in the life cycle of the peasant family constitutes a major contribution to our knowledge of the daily life of rural people in France during the last two centuries. Her approach owes much to van Gennep's theories about *rites de passage*, but moves beyond that approach in employing much of the panoply of structuralism to interpret custom, ritual and sayings, her inspired and imaginative

use of the proverbs employed by peasants allows them to speak to us about their lives and feelings.

Mme Segalen's book — sympathetically and efficiently translated by Sarah Matthews — is constructed around a major dispute among historians and social scientists concerning the "rise of the couple". For some, pre-industrial society meant the primacy of "instrumental" over "affective" values — which, deduced from sociological jargon means that peasants (and many others) married more for economic or material gain than for sentimental reasons, and that their married lives were for the most part the loveless unions of work partners more concerned with survival than with affection. Both Edward Shorter in his controversial *The Rise of the Modern Family* (1976), and Eugen Weber in his *Peasants into Frenchmen* (1977) have been influential in arguing this position. Jean-Louis Flandrin, among others, has opposed this view. In his *Les amours paysannes* (1975) Flandrin argues that the evidence of illegitimate birth statistics from 1500 to 1900 indicates a rising trend in "love" among peasants almost an "explosion" of amorous feelings. Rather than being characterized by a lack of affective emotion or sentiment, pre-industrial peasant family life was instead profoundly marked by such values.

Love and Power in the Peasant Family is a careful and richly documented study of relations between man and wife in the rural France of the nineteenth and twentieth centuries. The world which Segalen describes is one in which the social order has its clear symbolic representation — a cultural order of great richness but one which serves to bind and legitimate the roles of men and women, husbands and wives. In coherent and well defined relationships. Such relations are established through the enactment of *rites de passage*, such as that observed in the Orléanais at the beginning of the nineteenth century.

The fathers and mothers of the married couple, after having led them into the nuptial chamber and shut the door on them, made the husband all with his behind in a bowl of water, and call cock-a-doodle-do three times, while his bride was made to kneel in front of him and answer cluck-cluck three times, being the song of the hen after she had laid an egg.

The symbolism of cock and hen is so closely associated with men and women's domestic and sexual roles that there are numerous proverbs which foretell death for those hens who try to play the cock — especially relevant to those women who would make sexual advances and thus disturb the "natural" order of things: *Quand le poule cherche le coq, l'amour ne vaut pas un nois*.

When the hen seeks out the cock, love isn't worth a fig (Limousin).

Nevertheless, as Segalen indicates, the "natural" order had to be created or negotiated in the first place, hence the variety of responses which could be made in any ritual situation. Thus, how the woman responded would determine the relations between her and her husband thereafter, as for example in the Loire, where as part of the marriage rite, the wife who has not hoed her garden by the end of April finds a straw mat set up in it, admonishing her for her sloth. The adulterous couple might see themselves mimicked by young people, or find trails of rotting vegetables, linking their houses together. Wife beaters in Upper Brittany were dealt with by the whole community, being caught and paraded round the village in a barrow, husband beaten over the head with a symbolic invasion of the natural order. In Valenciennes, for example, "The man who allowed his wife to beat him mounted a dokey, holding the dokey's tail in his hand, while his wife, mounted on the same animal, held the bride and

BOOKS

Realities of peasant marriage

In Tarn, "If the log burned until New Year's day, it was the husband who ruled the household. If not it was the wife. If the log caught light by the smaller end, and if that end was the first to be consumed, the wife would rule the household all year."

The multiplicity of such customs and the rituals associated with them, Segalen argues, attest to the fact that "beyond the framework of civil and Church law, the question of authority between the couple is still an open one" (page 36). There is, of course, a certain ambiguity built into the rituals — as with proverbs, my one can read what they want into them: normative codes, their mediation into behaviour remains a process in which peasants are voluntaristic actors.

One of the problems with the arguments of Shorter *et al* is that they rely too heavily on the impressions of unsympathetic bourgeois observers of rural life. Victor Hugo's brother Abel, for example, in his *La France Peasanne* — a widely quoted source — seems too often over-concerned to compare peasant behaviour with the urban morality of Parisian life. As Segalen shows so much, peasant affection was transmitted through gestures whose symbolism would often have escaped the traveller in search of exoticia, all too ready to rely on (and no doubt embroider) the lurid tales of small-town notables. Such observers would have been almost incredulous at the rough courting of Breton peasants, who threw pebbles at one another, thumped each other on the back, gave hefty blows to knees and shoulders and squeezed fingers so hard as to occasionally dislocate them. The force of the blows being supposed to indicate the strength of emotion. Bourgeois morality would have been offended by this evidence of peasant "brutality", thus conveniently ignoring the fact that a different code of love gestures might exist in peasant communities, where courtship by means might be an effective way of measuring the physical capacities of a future wife, important in the hard physical labour which constituted so much of peasant life.

Segalen shows how what are nowadays regarded as the intimate, personal details of a couple's life were formerly the responsibility of the rural community. She is thus led to question the notion of a "couple" as a separate entity. Because in the rural world social organization and the organization of labour are "fundamentally communal", the emergence of a nuclear family based around the couple has, she maintains, emerged slowly in peasant communities. For her, the notion of a household is a more useful concept to describe the domestic organization of the lives of peasant men and women. It expresses more fully the interconnections of family life and community life which are so typical of traditional peasant societies. But it also allows her to demonstrate how male and female roles are interdependent and complementary, and to question the conventional view of peasant women as subordinated to male authority, which again has arisen in part because of the gullibility of some authors using the folklorists' accounts at face value.

In the carnival (*charivari*) the interpenetration of family and community are brought directly into view, the wife who has not hoed her garden by the end of April finds a straw mat set up in it, admonishing her for her sloth. The adulterous couple might see themselves mimicked by young people, or find trails of rotting vegetables, linking their houses together. Wife beaters in Upper Brittany were dealt with by the whole community, being caught and paraded round the village in a barrow, husband beaten over the head with a symbolic invasion of the natural order. In Valenciennes, for example, "The man who allowed his wife to beat him mounted a dokey, holding the dokey's tail in his hand, while his wife, mounted on the same animal, held the bride and



In a nineteenth-century print from Pellerin in Epinal, a man and woman fight over a pair of trousers.

guided it. In this manner they were obliged to go all around the village preceded by music and young people". What this meant was that in traditional French peasant communities, families were very much more interdependent than is now the case: everyone was answerable to everyone else, and an infraction against a husband or a wife had repercussions for the entire community.

The maintenance of social cohesion was thus the responsibility of the entire village which in its ceremonies and rituals would provide a public admonishment to anyone who transgressed the moral code. Since these codes were closely linked to matrimonial and other strategies designed to safeguard the peasant household and ensure the continued subsistence of its members, rules about endogamy, relations of authority, and the "proper" division of labour fall into place as the cultural supports of a peasant mode of production. Those rituals in which the victim is a browbeaten husband were not designed to protect him, nor to condemn his wife. Rather, they were aimed at the husband's failure to control his own household. His weakness constituted a danger to the entire social order of the village.

The argument put by Martine Segalen is thus subtly different from that of Weber and Shorter. Where they find an absence of affection and emotion in relations between husband and wife because of the lack of evidence that a recognizable peasant "couple" existed, Segalen argues that intrinsically romantic relationships were not ruled out simply because wider family, household and community played such an important part in the relations between the sexes. Because the "couple" did not have the same social or cultural significance as it has today is no reason to suppose that the feelings of love and affection we associate with it were absent in previous historical periods.

The frequently observed lack of privacy afforded to husband and wife by peasant housing, for example, has been used as evidence that "normal" sexual relationships between husbands and wives would have been constrained. However, such a reading betrays a certain ethnocentrism on the part of the observer, bred of the conventions of "modern" relationships where sharing a bed and having sex are unthinkable, if not associated. Barns, haystacks, cowsheds, copes and fields presented plenty of other opportunities for sex to peopleless hidebound by the automatic connection bed = sex.

None the less, the full expression of female sexuality does seem to have been strictly monitored in order to maintain the "natural" order, by

most peasant cultures: as we have seen the hen/cock imagery is often used to this end, but other allusions may also be employed:

Femme couchée et bois débout, homme en vit jamais le bout
A lying woman and standing wood, a man will never see the end of them (Anjou)

It would be wrong, however, to give the impression that this fascinating book is solely concerned with the cultural and symbolic aspects of peasant family life. Mme Segalen is quite clear that the relations between household and family members have to be seen in terms of the organization and structure of production in the agricultural and rural-craft family. She is particularly enlightening about the actual distribution of tasks between the sexes, indicating how both men and women were typically involved in various aspects of farm work. The all too easy assumption that women's work is confined to the "home" or the "domestic" sphere, breaks down in face of the evidence — which shows men and women engaged in complementary activities. Certain tasks were reserved to each of the sexes — although again, considerable regional variation is evident in this domain as in all the others. Women are to be found milking cows, raising calves and pigs, keeping accounts, harvesting one or other crop, growing vegetables, force-feeding geese, making cheese as well as carrying water, cooking, cleaning and mending clothing, and so on. Men in fact also cooked — although theirs was a carefully delineated type of cuisine involving grilling rather than the "feminine" boiling and simmering, which was carried out on festive occasions and in their own symbolic domain, usually outside the house.

In sum, then, this is a rich, and lively book, casting new light on so many aspects of French rural life in the nineteenth and twentieth centuries. To use Peter Laslett's apt phrase, it describes a "world we have lost", one which has melted away with the agricultural modernization and urbanization of the postwar French economic miracle. Our colleagues across the Channel are indeed fortunate to have, not merely the ATP itself, but also a rich network of regional museums devoted to portraying the cultural heritage of the peasant world. It should be noted, however, that British sociologists are belatedly turning to the ethnography of our own rural cultures, and it is to be hoped that they will feel encouraged in their efforts by the success of books like Martine Segalen's.

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BOOKS

Party patterns

Multi-Party Politics and the Constitution
by Vernon Bogdanor
Cambridge University Press, £18.50 and £6.95
ISBN 0 521 25524 4 and 27526 1

Those who write didactically about contemporary politics incur the risk of being overtaken by events. Not for the first time Vernon Bogdanor has exposed himself to such a risk.

In this book his thesis is that something called "multi-party politics" has emerged and part one suggests reasons why. Part two speculates on some of the consequences of this change for the constitution. But in terms of seats won and by whom and how the country is governed, the recent election has not produced multi-party politics. Instead it has emphatically confirmed Mrs Thatcher in office and she has no taste for revamping the constitution. Ergo, this book seems to have lost its raison d'être in the moment of its appearance: it hypothesizes on the basis of hopes which proved to be illusory.

To leave the matter there would, however, be uncharitable and, furthermore, would discount too lightly the argument that a condition of "multi-party politics" has emerged. For while the allocation of seats in Parliament still confirms the dominance of two parties, the distribution of votes in the country does not. What we have, therefore, is a multi-party competition for votes with three (or four?) parties now gaining 97.5 per cent of the votes cast, but an essentially two-party system surviving in the distribution of seats. It is a pity that Bogdanor does not make a sharper analytic distinction between multi-party politics as a condition defined by the ability of more than two parties to compete successfully for votes, and a multi-party system which exists only when a pattern of relationships involving more than two parties is established and maintained in and through the procedures of representation.

This distinction is important because it points to a possibility that Bogdanor seems anxious to discount. This is that for a variety of reasons (many of which he alludes to) party allegiances have weakened sufficiently to allow competitors to the two major parties into the field, but that this does not demonstrate any profound change in popular attitudes towards the system of government as such and the role, and behaviour of parties in it. In other words the modern British constitution has been profoundly influenced by the two-party constellation (as Bogdanor emphasizes) and, despite the willingness of over a quarter of the voters to opt for a third party, the vast majority of voters still assume that the constitution should continue to express the consensus of that experience.

This view of the position is discounted here, chiefly, I suspect, because the author ardently yearns for a genuine three-party system. This commitment colours his explanation of the growth of multi-party competition in recent years. He emphasizes three factors: disillusion at the failure of the Conservatives and Labour parties to manage the economy successfully; the growth of nationalism in the non-English parts of Britain (modestly presented as "the politics of territoriality"); and social changes eroding traditional party loyalties rooted in class. Furthermore, it is argued that the two main parties have become more radical in their policies, departing from the consensus dominant in British politics since 1945. Thus the rise of the Alliance is seen as portending a revolution of the centre.

This explanation is good in parts. But it is tendentious in its account of Conservative "extremism" and perverse in its failure to pay proper attention to what has been happening in the Labour Party. The most important reason for three-party competition is the steady decline of that party, brought about at the level of day-to-day political action chiefly by the folly of trade union functionaries and the antics of left-wing activists. There may, of

course, be deeper reasons, necessarily speculative at this time, and it is possible that in contemporary British society a party institutionalizing trade union participation in competition for votes and governing the country has become an anachronism. Be that as it may, Bogdanor's explanation of the phenomenon he claims to be analysing is incomplete and unrealistic, as indeed the voters showed on June 9 by reducing the Labour Party in the country to its least parlous condition since 1918. By so doing they gave Mrs Thatcher a major advantage in seats and the Alliance the chance of demonstrating that for the moment there is real multi-party competition for votes.

The implication of these remarks is that there is a different and more plausible diagnosis of current changes in the pattern of parties. It is that the Labour Party may be in process of dissolution. It would be foolish to assert that this is bound to happen: there is no basis on which we can make predictions about such matters. But there are at least many signs that what is happening is that a new party formation is attempting to replace one which is in decline. Not as Bogdanor argues against this prospect at all convincing, resting as they do on an impressionistic treatment of volatility and instrumentalism in the electorate as well as on some sweeping generalizations about the reduced importance of parties in the political processes of western democracies. However, if

Throwing hats into the ring

The Current Crisis in American Politics
by Walter Dean Burnham
Oxford University Press, £22.50
ISBN 0 19 503219 5

Walter Dean Burnham is one of those who for nearly twenty years have argued, and have now made generally acceptable, the case for seeing American history and politics in terms of periodically recurring "critical realignments". He believes that in periods of abnormal crisis there is an increased polarization among parties and political elites; and, as consequence, a major change in the direction of public policy.

The essays in this collection all reflect and illumine "the current crisis", and they show for the 18 years over which they were written a quite remarkable unity of themes and viewpoint. Burnham's principal theme of "critical realignments" he did discuss in detail, of course, 13 years ago in his major study *Critical Elections and the Malapportionment of American Politics* (an amplified study of which is now in press) so there is not much new in his essays on the subject in this volume. What is interesting, however, is his suggestion that such fundamental electoral shifts recur regularly in American history and that they constitute "America's surrogate for revolution".

Given his acceptance of the views of his mentor Louis Hartz that America inherited liberalism without ever having fought for it, that it has never experienced (as most states have) the struggle to emerge from a colonial economy to a capitalist system, it is not surprising that he should see the importance of these periodical shifts in power and the degeneration of political parties as these shifts occur. Clearly 1932 was one such. But why does he not fully accept 1980 as another? And why, also, does he contend that these almost generational shifts do not occur elsewhere? It has become a fashionable pastime to argue over which election can be explained in this way, and not only in the US. Thus in Britain 1945 and 1979 are of the same order. But maybe these too are a "surrogate for revolution".

Burnham also analyses election turn-outs, and he points out that in the American past, when levels of education were lower, turn-out was often high. Electoral participation in the US declined after 1900, and parties often overplayed their hand in the period over which the political levels rose. In recent years, however, turn-outs

this is what is happening the outcome is not likely to be the "tripolar" politics ascribed by Bogdanor, but a favour of the Liberal-SDP Alliance's probe more deeply the consequences of a multi-party system and coalition government for the structure and operation of Parliament (and after all much of our constitution consists in the procedures and conventions of Parliament), for the concept of representation, for the idea of responsibility in office, for the political neutrality of the civil service and for the status of parties as private associations, to mention only a few of the major constitutional issues which might be posed.

The stabilization of tripartite or multi-party politics would, however, be likely to occur if proportional representation were introduced. Underlying much of this work is the belief that somehow or other this will happen. However, since this change is not going to occur now and the election has not produced a hung Parliament, the constitutional questions posed here do not arise. Nevertheless, there are three comments I will make on the constitutional reflections offered. First, it does not seem to me that the dusting-over of historical precedents (1923-24, 1929, 1931-32 etc) is all that instructive, and indeed Bogdanor implicitly admits this in the emphasis he gives to the infinitely variable factors of party interest determining what was deemed to be the constitutional "when, for example, Baldwin lost his majority in 1923 and 1929".

Secondly, it seems to me that by concentrating on the right to dissolve Parliament and the choice between a minority government and coalition when no single party has a majority, Bogdanor has taken too restrictive view of the constitutional implications

of a stabilized multi-party system. It is surprising that someone so strongly in favour of the Liberal-SDP Alliance's probe more deeply the consequences of a multi-party system and coalition government for the structure and operation of Parliament (and after all much of our constitution consists in the procedures and conventions of Parliament), for the concept of representation, for the idea of responsibility in office, for the political neutrality of the civil service and for the status of parties as private associations, to mention only a few of the major constitutional issues which might be posed.

Thirdly, no serious attention is paid to the question whether there is any evidence at all that the country is ready for the profound change of principle involved in moving from single-party government to coalition as an enduring condition. One of the persistent features of British political experience is a preference for conferring wide discretion to act on office-holders; subject to the constraints of criticism and the threat of dismissal. Such a preference involves trust in office-holders as well as recognition by them that they hold office as a trust. The underlying principle of coalition rule is different: through the parcelling-out of the responsibilities of office it represents the institutionalization of mistrust and has often stemmed from an experience of mistrust of these who seek office. But Bogdanor does not probe this level of

White House rivalries

Power and principle: memoirs of the National Security Adviser 1977-81
by Zbigniew Brzezinski
Widenfeld & Nicolson, £15.00
ISBN 0 297 78220 7

America's foreign policy process has become excessively fragmented in recent years. A decentralized Congress has reclaimed the right to intervene in the conduct of the United States' international relations and bureaucratic infighting has been elevated by the media into a popular art form.

In particular the differences of opinion between the State Department and the rest of the administration make it difficult for allies to ascertain precisely what actually is the American government's position on a range of issues. During the Carter presidency there was a running battle between Cyrus Vance, the Secretary of State, and the publication of the latter's memoirs provides an intriguing, if necessarily one-sided, view of the structure of decision-making in the Carter White House and of how the various foreign policy crises and initiatives of those four years were handled.

The conflict over the control of foreign policy and the rivalry within the administration are explicitly acknowledged by Brzezinski who describes his senior colleagues such as Vance and Harold Brown as "key players" and frequently reveals the team as trying to "score" points off each other. At the root of the divisions between the Secretary of State and Brzezinski, however, seems to have been a distinct disagreement about the extent to which the Soviet Union could be accommodated by the United States. Brzezinski, a political realist of Polish origin, was far more hawkish than Vance on the specific provisions of the SALT II Treaty and on the tone which the United States ought to adopt towards the Soviet Union in relation to that country's indirect military intervention in the third world.

And, while Brzezinski wanted the revived ties with China to extend beyond trade and diplomatic friendship to shared understandings about security, Vance was more cautious and fearful of the effect which a "China card" might have on Russia.

The most illuminating chapter of the memoirs in many ways is the one which deals with the fall of the Shah and the United States' paralysis in the face of events in Iran. The tradition from monarchial rule to Bakhtiari government and then to the desertion of the Khomayni regime provides an object lesson in the weaknesses

of American diplomacy and decision making. From Brzezinski's point of view it was vital to back the Shah and reassure him of continued United States support. But once messages were filtered through the Department which was less committed to Brzezinski of the Shah's regime, American interests in the region through an Ambassador - William Sullivan - who did not give the Shah the support he was requesting, the Shah's willpower and who saw Khomayni rather fancifully, as a "Gandhi-like figure, they were inevitably diluted.

Brzezinski wanted a coup of a kind to restore a strong government and prevent the rapid disintegration of the Shah's and perhaps his successor's regime. But the role of hawk had to be clearly ascribed to Brzezinski by time of the Iranian crisis that he, as Brzezinski himself notes, a "cautious scepticism and opposition" to the President and the State Department. Indeed - as he has written - "America's postwar politics - the role of the State Department comes in for bitter criticism. Brzezinski suggests that the lower echelons of State, at Iran Desk, were clearly "cheering" Shah's opponents" during the darkest hour of how best to maintain a stable government.

The loss of morale and momentum which followed the fall of the Shah stands in sorry contrast to the nation's 1977 ten-point plan which Brzezinski had developed to give Carter's foreign policy a coherent strategy. Paraphrase all Presidents find their administrations floundering and lacking direction after the initial two years. Carter's was so markedly debilitated by internal quarrels that one must question whether the tension which he brought to the administration by having powerful figures struggling for control of foreign policy simply makes a situation worse. Does a President's flamboyant National Security Adviser such as Brzezinski and does he need the institution at all?

Brzezinski's conception of his role and his own discussion of (the book suggests that he has a doubt that the nature of contemporary foreign and security policy issues are such an "office independent" Coordination across departments, both domestic and foreign, oriented, is a major task as is the supervision of the implementation of decisions. The problem with Brzezinski's handling of the office was that he emphasized the policy as opposed to the management and coordination aspects of the job thereby increasing the potential for conflict with other departments.

For those who enjoy the sports of which Professor Brzezinski's book is written, it might be useful to know that Mr Vance is about to publish his memoirs.

Gillian Peele

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BOOKS

Perceptual inferences

Ne Five Fingers are Allike cognitive amplifiers in social context
by Joseph C. Berland
Harvard University Press, £21.00
ISBN 0 674 62540 4

On the Torres Straits Expedition in 1898 W. H. Rivers and his companions took particular note of the "visual powers" of the islanders, a fact of concern to travellers both before and since. He himself noted that "natives" have been variously reported as "able to distinguish birds among the thick foliage of trees" or to identify and describe a boat far at sea when their European companions could barely see it. Rivers, however, offered an original sociological analysis of the phenomenon; the "visual acuity" of these people, he observed, was not particularly extraordinary but rather it was their "special knowledge" of their environments which led to these "visual accomplishments".

Having developed familiarity in attending to and discriminating between minute indications given by sense organs in relation to their environment, natives are then able to "see" elements of it more clearly than strangers; it is not acuteness of vision in some physiological sense that is being exhibited but correct inference from familiar cues. According to Berland, cross-cultural studies of psychological performance have not paid sufficient attention to this insight; while emphasizing "organism-environment interaction" they do not give sufficient attention to the fact that perceptual inferences are socially mediated. People learn to pay attention to and select elements of their environment in different ways according to their socialization and it is these differences that help to explain variations in cognitive development.

Some researchers, however, have begun to develop a language and a method for dealing with this. Bruner, for instance, describes the development of ways of acting, imagining and symbolizing that a member of a culture internalizes as processes that "amplify his powers". Levi-Strauss similarly refers to a subculture as presenting significant dissonance from the rest of the culture "with respect to access to its major amplifying tools". Berland, however, feels that these descriptions do not go far enough in explaining the variability of such "amplifiers" from one cultural setting to another; the reference to them as "tools" simply begs the question as to how experience and skills learnt in one setting may affect performance in another.

It is at this point that he feels himself to be at variance with his colleagues in psychology and believes that they require some help from the discipline of anthropology. Attuned as they are to experiment rather than observation, to testing rather than studying subjects in their "natural" environment, psychologists fail to pay attention to the really interesting question of variation in patterns of individual access to and experience with the various elements and skills they are describing - to the "cognitive amplifiers" of the subtitle. Berland hopes to redress the balance by taking to the "field" the battery of tests classically used to assess psychological performance and combining them with classic anthropological methods of participant observation. He hopes thereby to bridge the disciplinary boundaries.

Berland's "ethnography" is a description of the Qalandar, peripatetic ascetics who make their living by performing with bears, monkeys, goats and dogs for the sedentary populations of Sind and the Punjab in Pakistan. They suit his purpose particularly well as they are acutely conscious of the uniqueness of each individual (hence the aphorism which he uses as his title) and of their responsibility as adults to train a child to develop his or her particular skills and potential - to "amplify" as it were, "cognitive amplifiers". Moreover, they themselves have an ideology of "testing" comparable to that of the professional psychologist. A child will practise arithmetic routines, firstly with animals but



Painted copy of King Germantane, the runic inscription on which symbolizes the formation of the Danish state and the close of Danish prehistory. Taken from *The Prehistory of Denmark* by Jørgen Jensen, published by Methuen at £14.95 and £8.95.

also in such diverse forms as juggling, comedy, music, and so on, and the "observer" will then conduct a critique, analysing his routines, sensitivity to audience, and so on.

Berland paints a warm picture of life around the camp fire in the evenings when people sit and discuss the routines and strategies by which they have derived income from different audiences and how they might sharpen performance. It was particularly their interest in training, of animals and of children, that opened the way for Berland to engage them in the numerous psychological tests he took with him to the field. Berland certainly took his field work seriously, living for long periods with different groups of nomads, packing his tent and equipment on to a lorry for journeys of hundreds of miles at a time of a birth in another group whose children he would like to test and even buying himself a "ten-month old Kashmiri black bear" to train alongside his informants. One cannot but marvel at the sight of him sitting outside his tent playing so many "Kim's games" with the various nomads who volunteered to be tested, for hours on end. Indeed, some of them took the exercises so seriously that they are still willing away making shapes and designs out of the blocks he gave them.

However, from an anthropologist's point of view his account of the Qalandar and various comparison groups of travelling artisans and settled people, remains essentially unsatisfying. His primary focus is to set the scene for his psychological experiments; and so specific aspects of infancy and childrearing are described, along with generalized references to the flexible and adaptive nature of Qalandar social organization, without either much use of the comparative literature on nomadic social structure or internal analysis of the processes and contradictions. The important scholarly detailed findings of the book will remain of more interest to the psychologist than to the anthropologist who will feel, perhaps, that such rich field work could still generate another, different account.

Given Berland's commitment to interdisciplinary work, this is an unfortunate conclusion. In part, this arises from the central contradiction of attempting to write cross-disciplinary books (as opposed to doing cross-disciplinary work oneself); namely that the specialist language of each discipline is often crucial to the argument and yet, by definition, the author can only expect readers to be proficient in one of them.

The respective difficulty of reading the different parts of Berland's book, according to one's native discipline, is, indeed, reminiscent of the problems faced by Haddon in trying to pick out distant boats that his native informants could "see" with ease; the "cognitive amplifiers" learnt by psychologists and anthropologists respectively do not always easily transfer to contexts where the other's discourse predominates. As the Qalandar might put it, "no two disciplines are alike ..."; making them alike is a bigger task than Berland seems prepared to recognize, as yet.

B. V. Street

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A battery of tests

Learning to Use Statistical Tests in Psychology: a student's guide
by Judith Greene and Marnetta D'Oliveira
Open University Press, £6.95
ISBN 0 335 10177 1

Developments in computing facilities routinely available to most psychology departments might be expected to have led to an urgent reappraisal of what objectives are served by courses in psychological statistics and what teaching and examination methods are appropriate. It is certainly debatable whether students still need an intimate first-hand experience of the mechanical paraphernalia of statistical tests which are at the heart of most current psychological statistics courses. Progress, however, is slow and the reappraisal is still awaited.

This goes some way to explaining why books like this one continue to be published, treading a well-worn path and making no concession to the revolution in computing that has taken place in the past twenty years or so. Although Greene and D'Oliveira assert that theirs is not a "cookbook" approach, there is a little doubt that the attraction of the book will reside in its well-chosen and comprehensive battery of parametric and nonparametric tests, each supplied with clear step-by-step instructions and tables.

The book is a condensation of the *Methodology Handbook*, the most lightweight component of the over-the-hill *Open University* psychology course. On cognitive psychology, Lightweight or not, it has proved to be popular with students in general as a convenient and useful compendium of working procedures for statistics. And no doubt it will continue

to appeal to that legion of non-numerate strugglers who nervously approach the rather low hurdles that examiners contrive to put in their way.

The book is an improvement on its predecessor, at least in terms of the ordering of information, with a more coherent progression through the parametric techniques, t-tests (making lesser conceptual demands) being covered before analyses of variance. Greene and D'Oliveira aim to show the reader how to choose among the collection of tests on offer in the book and they seek to do this without recourse to the usual pettifoggery of preliminary statistical principles. Necessarily this means that the treatment of theory is unorthodox, undemanding, and at times cavalier.

The student may be left with the feeling that this statistics business is a little a chore (reflected by the routine nature of the examples) which should not be taken too seriously. Certainly rigorous attention to theory is not a minor feature of the book. There is for instance no mention of sampling distributions or statistical models, and the rationale provided for each test is no more than a brief summary of the associated computational procedures.

"Correlational designs" is the faintly curious title of the final chapter and this turns out not to be concerned with designs in the usual sense, but instead gives a highly abbreviated treatment of the Spearman and Pearson correlation methods. Because the book states that it is concerned only with inferential statistics (which is about evaluating the "significance" of experimental data), it is consistent for the distinction between description and inference to be overlooked in the context of correlation too. However, at this level, it is simply misleading to state that Pearson's *r* requires the usual assumptions for parametric tests. The kind of abbreviation that issues like this receive in the book serves to obscure the principles that ought to be made plain to students.

Their confusion will be increased if they stop to ask what Greene and D'Oliveira mean when they note that homogeneity of variance is a prerequisite for using the Pearson coefficient. Does this mean that weight and intelligence must have equal variances for their correlation to be calculated? Presumably the authors intend is homoscedasticity, a concept whose pronunciation takes longer for most of us than the authors devote to the discussion of basic concepts. This is symptomatic of the superficial examination that theoretical issues receive throughout the book, and which is plainly considered adequate and appropriate for the readership. This, however, may itself be a direct result of the unrealistic and unreasonable goals that we continue to set for students under the pretext of giving them an education in psychological statistics.

Paul Barber

Paul Barber is lecturer in psychology at Birkbeck College, London.

Rule of thumb

Psychology in Practice: perspectives on professional psychology
edited by Sandra Canter and David Canter
Wiley, £9.95
ISBN 0 471 10411 6

Psychology has been badly and anthropologically taught in most British universities and polytechnics for the past 25 years, and even academic psychologists must now be aware of, and distressed by, their lack of public impact. Every year eager schoolchildren interview for courses in psychology and betray the same misconceptions about the subject prevalent in the 1950s. Worse still, a degree in psychology is seen as an academic indulgence or at best as a lottery ticket for entrance to only two crowded professional academic teaching or clinical psychology. This collection of essays by 17 applied psychologists is a good attempt to rectify this situation.

An introductory chapter wittily and perceptively expounds some subtle trends. The editors point out that the main stated motivation of many psychology undergraduates is to "work with individuals" or to "help others", and because of this they tend to see their future careers only in terms of clinical psychology. Meanwhile clinical psychologists increasingly follow other applied psychologists in a concern for policy formulation in groups and organizations. Bernard Marcus's blunt chapter on psychologists in the prison service neatly documents this point.

Canter and Canter discuss some disadvantages of attitudes developed by academic training for psychologists attempting applied work: "Previously our scientific training was such that we expected to be able to predict future events with a high degree of certainty, or we would dismiss the theory on which such predictions were based." A correct implication is that applied scientists should learn to accept and apply rule of thumb solutions, when they are available, and that search for precise theories can frequently distract us from necessary ad hoc solutions to problems. It would, however, be very dangerous for applied psychologists to agree further that "by removing our expert status we have removed the burden to produce expert solutions". Does the applied psychologist then claim no expertise because he cannot hope to meet the demands which such a claim would place on him? Precisely what credentials can an applied psychologist claim?

Canter and Canter's apparent conclusion is unsatisfactory: "We are less concerned with scientific respectability for its own sake and are more and more concerned with doing a worthwhile job, judging our success, in part at least, by the satisfaction of our client and recognition from other professional groups." At first reading this seems a robust and praiseworthy affirmation of responsibility to the task in hand rather than to impractical academic perfection. Thinking things through, however, I am not too sure. "Recognition from other professional groups" may degenerate into mutual protectionism and clients may express themselves satisfied with what they get from a professional only if they do not know that better can be done. All pure scientists face the temptation to look for ideal rather than provisional solutions. Unless applied scientists also learn to measure their achievements against the limits of what is theoretically possible they will neither serve their clients nor preserve the respect of their colleagues.

Sequent articles on particular applied disciplines are moderate, lucid and informative, and show a real concern for continuous professional re-assessment and self-improvement. Only some give pause. A breezy chapter on forensic psychology by Lionel Haward warns that "today's jurists contemplate the behavioural scientist with all the emotions of a Victorian spinster facing the neighbourhood rapist, curious as to what might be revealed but dreading the consequences". In my experience, however, Haward's fantasy of potency is empty, since jurists are more cynical than apprehensive of "expert testimony" from "forensic psychologists". Still, his article makes amusing reading, if only as a compilation of such ill-substantiated "facts" as that "jurors award higher damages than do thin ones". The article negates Haward's criticism that "psychologists are poor trumpet blowers"; they blow quite accurately but the quality of the performance is uncertain.

Sober, informative chapters such as those on psychology and education by Keith Topping and by Athelinda McIntosh, on psychology and work by Pat Shipley, on psychology and evaluation by V. David Lee, and on psychology and mental handicap by James Meles may produce a more durable impact. Ray Bull contributes a resigned chapter in which, after a hopeless misunderstanding of the use of the null hypothesis in science, he sensibly suggests that psychologists may have, for some time, to content themselves with the "least worst" solutions to most applied and some theoretical problems. His point that psychologists should stop publicly criticizing each others' honest best efforts is a very well taken one. In response, it is a pleasure to say that this is a most useful, readable and timely book.

Patrick Rabbitt

Patrick Rabbitt is professor of psychology at the University of Durham.

Research & Studentships continued

**HUMBERSIDE COUNTY COUNCIL
SOCIAL SERVICES/HUMBERSIDE COLLEGE
OF FURTHER EDUCATION**
Research Officer
SO1 £9,060-£9,660

This full-time post is jointly funded by the Social Services Department and the Humberside College of Higher Education for a period of two calendar years from 1st September, 1983. The person appointed will be based in the Planning, Training and Research Section of Social Services Headquarters at County Hall, Beverley. The duties pertaining to the post will relate to both the Social Services Department and the College of Higher Education.

The appointment is a new departure that will provide challenging opportunities for the person appointed. In the first instance the duties will entail an involvement with matters relating to the European Social Fund and to information Technology using micro-computers. In addition there will be some teaching duties in the School of Applied Social Studies. The person appointed will be a graduate. A relevant degree and/or a Social Work qualification will be an advantage. Knowledge of research in qualitative and statistical methods is a requirement. Previous teaching experience will be helpful but may not be essential.

Candidates must hold a current driving licence and a casual user car allowance (not exceeding 1,450 cc rate) will be payable. Assistance with relocation expenses may be granted in approved cases.

Internal enquiries may be made by contacting Mr B. Paynter, 0482 697131 (Ext. 3106) or Mr A. Harvey 0482 42167.

Application forms and further details are available from: The Director of Social Services, County Hall, Beverley, North Humberside.

Closing date 5th August, 1983.

Full and fair consideration will be given to all disabled applicants.

**The University of
Manchester
RESEARCH
ASSISTANT IN
SOCIOLOGY/ANTHROPOLOGY**

Applications are invited for a research assistant to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Sociology or Anthropology. Applications should be sent to the Director of Social Sciences, University of Manchester, Oxford Road, Manchester M13 9PL.

**POLYTECHNIC OF
CENTRAL LONDON**

The following Research posts will be available from 1st September 1983:

Research Assistant - History Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in History. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Economics Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Economics. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Sociology Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Sociology. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Anthropology Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Anthropology. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Education Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Education. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Law Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Law. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Medicine Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Medicine. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Engineering Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Engineering. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Arts Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Arts. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Science Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Science. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Business Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Business. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Health Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Health. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Environmental Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Environmental. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Information Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Information. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Communication Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Communication. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Design Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Design. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Architecture Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Architecture. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Fine Arts Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Fine Arts. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Music Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Music. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Drama Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Drama. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Film Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Film. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Television Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Television. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Radio Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Radio. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Journalism Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Journalism. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Public Relations Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Public Relations. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Marketing Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Marketing. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Management Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Management. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Accounting Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Accounting. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Finance Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Finance. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Law Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Law. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

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Research Assistant - Environmental Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Environmental. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

Research Assistant - Information Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Information. Applications should be sent to the Director of Social Sciences, Polytechnic of Central London, Regent Street, London W1R 8AL.

**DEPARTMENT OF ACCOUNTING AND FINANCE
LECTURER GRADE II/SENIOR
LECTURER IN ACCOUNTING**

Applicants will be required to teach to an advanced level on degree and professional courses and should preferably have a knowledge of computers and their applications.

**DEPARTMENT OF BUSINESS STUDIES
LECTURER GRADE II/SENIOR
LECTURER IN MARKETING/
BUSINESS POLICY**

A person with a relevant first degree plus a higher degree and/or appropriate industrial experience is required to contribute to teaching and research in the above areas.

**DEPARTMENT OF ELECTRICAL AND ELECTRONIC
ENGINEERING
LECTURER GRADE II/SENIOR
LECTURER IN ELECTRICAL AND
ELECTRONIC ENGINEERING**

Applicants should preferably have some experience in the field of linear Electronics or Communications Engineering, or Computer Engineering.

**DEPARTMENT OF PHYSICAL SCIENCES
LECTURER GRADE II/SENIOR
LECTURER IN PHYSICS**

Applicants must have experience of teaching modern physics.

**DEPARTMENT OF SOCIAL STUDIES
LECTURER GRADE II/SENIOR
LECTURER IN NURSING
STUDIES (HEALTH VISITING)**

The person appointed will be a qualified health visitor. A degree and/or qualification in health visiting and teaching qualification recognised by the Panel of Assessors in District Nursing would be an added advantage.

Salary scales: £7,215-£13,443

Further details and form of application are available from The Staff Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date 10th August, 1983.

**TRENT
POLYTECHNIC
NOTTINGHAM**
HONG KONG BAPTIST COLLEGE

Applications are invited for the following posts:

1. Assistant Librarian

Applicants should have a recognised university degree and a professional qualification in librarianship (MLIS or A.L.A.) and at least 3 years of post-qualification cataloguing experience in a large academic library. Knowledge of foreign language and practical experience of computerised systems would be an advantage. The candidate will be responsible for cataloguing and classification of monographs, serials and non-print materials, and co-ordinating automated cataloguing systems.

2. Lecturer in Communication

Applicants should have a good honours degree or a higher degree in film-making or communication. The appointee is required to teach film-making, theories and practices, editing, sound, and directing.

SALARY SCALE: HK\$5,890-11,530 p.m. (present)
HK\$7,870-14,010 p.m. (revised)
*Pending government approval

FRINGE BENEFITS:

Provident Fund or Gratuity, Medical Benefits, Vacation Leave and Housing Provision for overseas appointees.

Application forms are obtainable from the Personnel Office, Hong Kong Baptist College, 224 Waterloo Road, Kowloon, Hong Kong. Completed forms together with copies of testimonials should be returned by August 18, 1983.

**POLYTECHNIC OF THE SOUTH BANK
Borough Road, London SE1 0AA**
**MICROCOMPUTER ADVISORY CENTRE
Temporary Lecturer
Grade II In Computing**

An energetic person is required to teach and run open access courses in programming and other aspects of computing. The ideal candidate will have significant experience of computing including the use of microcomputers. He or she will have some experience of teaching adult students, and preferably experience in administration outside the education field. Emphasis is more on software and the use of computers, than on hardware or computer theory.

The Microcomputer Advisory Centre has been set up specifically to develop new courses outside the normal undergraduate environment and there will be every opportunity for innovative work.

The appointment will be for one year only.

Salary will be in the range:

£3,154 (x10) - £12,507 pa inclusive of London Allowance

Those interested should telephone 01-825 8888, Ext. 2488 for informal interview.

Application form and further particulars from the Staffing Office, Tel: 01-825 8888, Ext. 2488.

Closing date for receipt of completed Application Forms will be 26th August, 1983.

URGENT

ROBERT GORDON'S INSTITUTE OF
TECHNOLOGY, ABERDEEN

**BUSINESS SCHOOL -
INFORMATION TECHNOLOGY -
OPERATIONS RESEARCH**

Graduate with experience of the production/operations function and knowledge of computing and statistical applications required for honours and unclassified degree level teaching. Participation in service teaching, research, consultancy, short courses and associated administrative activities of the School. Previous lecturing experience desirable but not essential. Salary range: £5,313-£13,125 per annum. Placing according to qualifications and experience. Assistance with removal expenses.

Details from Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 1FR (0224 636611).

**POLYTECHNIC OF THE SOUTH BANK
Borough Road, London SE1 0AA**
**FACULTY OF THE BUILT ENVIRONMENT
DIVISION OF MATHEMATICS
SENIOR LECTURER/LECTURER II
IN COMPUTING WITH MATHEMATICS AND/OR
STATISTICS (Ref: DM10)**

Applications are invited from Honorary Graduates or the equivalent to teach computing with Mathematics and/or Statistics on degree (CNA) and diploma courses.

Functional experience with computer applications would be an advantage.

Salary will be in the range:

£11,882 (x10) - £14,382 pa inclusive of London Allowance

Further details and form of application are available from The Staffing Office, Polytechnic of the South Bank, Borough Road, London SE1 0AA. Tel: 01-825 8888, Ext. 2488.

The closing date for receipt of completed application forms is 8th August, 1983.

Plymouth Polytechnic
**RESEARCH
ASSISTANT**

This one year post is invited for a research assistant to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Sociology. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Research Assistant - Economics Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Economics. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

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Research Assistant - Engineering Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Engineering. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Research Assistant - Arts Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Arts. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Research Assistant - Science Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Science. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Research Assistant - Business Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will be responsible for data collection, analysis and report writing. The post is for a period of 12 months, starting in September 1983. The salary is £5,000 per annum. The post is open to graduates in Business. Applications should be sent to the Director of Social Sciences, Plymouth Polytechnic, Drake Circus, Plymouth PL4 8AA.

Research Assistant - Health Graduate to work on a project entitled 'The Role of the Family in the Socialization of Children'. The project is funded by the Social Sciences and Humanities Research Council. The research assistant will

Don's diary

Monday

Twenty pairs of eyes of Brixton and Clepham further education students stare amazedly at me, their American teacher. Today I attempted to teach Macaulay's "The Keeping of the Bridge", which is required in the O level syllabus in the narrative verse section. Although Carole, a colleague who teaches literature, had managed to inspire in me some enthusiasm for the poem on Friday evening over dinner in an Indian restaurant and although I have met many English people who can recite the poem by heart, I feel by adhering to the syllabus I'm killing what love of literature these students might have. Why doesn't the syllabus reflect something of the African, West Indian and Indian eyes in front of me? In an introductory literature course in New York City I would include literature by black and Hispanic writers. I feel so constrained by the syllabus.

In the afternoon I spent two hours with Technician Education Council certificate students teaching them how to fill in John Laing application forms for jobs in the construction industry. Their tutor has told me that probably not more than one out of twenty of them will ever hold a regular job. Consequently, they don't take themselves seriously and are a difficult class to manage. Thomas spent the class in fear of being arrested by the police. When I assured him I wouldn't allow any police in my classroom, he was much relieved.

Tuesday

"Miss, we'd be good if you gave us sweets." This from Amarji, a pretty Indian student who sits in the front row. I am amazed. Is this a college?

Tuesday's class is always difficult because it lasts only one hour instead of the usual two. It is best to give them written work immediately. Otherwise, the Avon catalogue, which they prefer to narrative poetry, wins.

Emily, my friend from Long Beach State University in California, visited today. There was concern among the senior lecturers because I hadn't informed the principal that she was coming. Used to American informality, I apologized but also wondered why I should introduce her to the principal when I as a Fulbright exchange teacher have not yet been introduced to him.

After English literature came communication studies for diploma TEC. Emily, looking grey and weary, told me she had to leave. My TEC diploma group, my most academically able group next to my A levels, arrived as usual 15 minutes late except for a faithful Jeremy and Dorrell. Because they had taken an assessment last week, I showed them a film on pollution entitled *And on the Seventh Day*. Quinlan's response was: "Oh, Miss, the United States must be a mess," yet the film was describing parallel situations in both countries.

Wednesday

My six-hour day which I find difficult because I'm used to teaching only 10 hours a week at La Guardia as opposed to twenty-two hours and eight hours of ancillary in London.

So two hours of narrative poetry. A good class today. Then on to my literature. I have an entire class of wall and floor tiles. They are 16, white, employed as apprentice tilers and stonemasons (a new word in my vocabulary). Today they were filled with apologies. Richard, for exposing during class heart-shaped tattoos on his bum and Tony for pulling a knife on another student who took his scarf. I hadn't taken the tattoos too seriously, but the general education department insisted on my writing a formal report on the incident.

The knife, however, was more the concern to me but of less concern to the college. I may be a New Yorker but never has a student pulled a knife in class in my 15 years of college teaching. I requested that the student not be admitted to class but received no support. I was afraid to face Tony,

today, but he was contrite.

Class was spent teaching them to write letters to the principal or to the Inner London Education Authority. The subject of the letters was the increasing violence at Vauxhall and what to do about it. One of the third-year tilers was beaten up last week.

Thursday

My only class on Thursday is a three-hour English language O level for part-time day students. Most of the students are in their 20s or early 30s. Today we start with a multiple choice reading test on birds from last year's examination. Multiple choice has recently been added to the exam and these students are mystified by it.

Then we finish last week's essays on description. Their writing is improving, but how many students will have eight passing essays in their folder by exam time? Although Maria writes a sensitive description of her town in Portugal that makes tears come to my eyes because of her ability to use words precisely and Jennifer writes a wonderfully political description of the Detroit fire, I feel I have not taught these students nearly as much as I do in New York.

What a different philosophy of literacy there is here. The use of dictionaries is discouraged; instead spelling rules are taught. No essays may be rewritten. In a meeting I commented that I would never submit something I had written before I showed it to various friends and then rewrote it. The answer: "These students are not like you, Susan." But without rewriting how do you teach a person to write? Instead I am told: "This student is not O level material." I retaliate by grinning at my students and saying: "Don't let anyone tell you that you aren't O level material. You may not be ready in June but in another year you could." Am I being too American?

Friday

By Friday I am exhausted. The unwritten rule in the States of two hours of preparation for every hour of teaching is impossible for me to maintain. Yet if a class doesn't go well, I feel defeated.

My A level literature students seem as tired as I am. They drag in 20 minutes late. My job is to teach them how to do practical criticism. Once a week I give them a poem, a prose passage, or a dramatic excerpt to explicate. The following week we discuss it. The students are reluctant. "Couldn't we discuss it first and then write on it, miss?" They lack the desire to struggle with a text, to risk being wrong.

To change the pace of the classes Carole and I did a class together on *The Winter's Tale* last week when I had a break from my illers. What rich, playful discussions we have. The students were mystified at how the two of us could have such fun discussing literature.

Then on to general studies for personal assistants. I am to teach them in two hours a week the cultural, aesthetic/historical/political section of the exam and help them do their projects in-depth. Today we discuss the development of Channel 4 and whether or not it is fulfilling what it set out to do.

Friday afternoon I cover one hour for Sue's pre-vocational students, the famous 3-C group. Sue is off on a geography trip to Wales. They are as raucous as ever. I let them talk about their lives and try to learn from them. From 4pm to 5pm I'm to cover for an English as a second language class. The independent lecturer has left me what he wants me to teach: a lesson on how to apologize. Fortunately, no students turn up.

Susan O'Malley

The author teaches at Kingsborough Community College, New York, and is at present an exchange lecturer at Vauxhall College of Building and Further Education, South London.

John Taylor, the former chief education officer for Leeds, who died last month at the age of 72, was one of the last of a generation of remarkable education officers who had a profound effect upon the educational scene in the post-war years. For many professional educators and readers of this and its sister journals that scene must be so familiar that it can be taken for granted. I came into it a little over 10 years ago and I still find its quirks and foibles fascinating. So I want to use John Taylor's department as an excuse for a few comments upon one of the more definitive episodes in our recent history.

The problem with John Taylor is that he was one of nature's listeners rather than talkers. I found that peculiarity a challenge because I myself come from a family of compulsive talkers, a large family of 12 at that. They all talk all the time. Inevitably such talkers attract other talkers so that the house buzzes with overlapping conversations and sometimes people go away shaking their heads in frustration. I remember as a small boy going into my father's study and seeing him talking with Stanley Spencer, his brother Gilbert and another brother whose name I never knew. They were all compulsive talkers and they were all talking at once. I have since met them separately and they have all told me the same story—that they could not get a word in because the others were taking all the time. The extraordinary thing is that such talkers do have a strange capacity for hearing the odd remark that they seem not to have noticed and will come back at you fiercely if they think it was disrespectful.

But back to John Taylor. He was not one of those victims, desperate to break in and make their point before disappearing from the platform for ever. He was more like the central character in *Brideshead* to whom everyone else relates. Charles Ryder is one of the more brilliant creations in fiction precisely because he says so little but hears and illuminates everything. It must have been even more difficult to ect than to write. Jeremy Irons did a superb job in recasting everything, showing that he was thinking even when he didn't speak a word, and supplying the continuity of the story. Above all, one began to understand why, even though Ryder played a minor role, everyone else either liked or loved him or had to apologise themselves to him.

In a totally different environment, I thought John Taylor had some of those qualities. I always felt that I ought to be telling him something, especially if it was mildly outrageous or downright scandalous (only about people from the past of course, never—or almost never—about those still around) and then wondering what indiscretions I had perpetrated. That may of course have been one of his gifts, letting people talk themselves into absurdity and then quietly getting on with the job. It also enabled him—sometimes thought in moments of disloyalty—to let other vocal people do the dirty work and shake things up so that he could come along quietly sort things out to everyone's relief. It is a habit I must try to cultivate sometime myself. But not—like St Augustine thinking about living a virtuous life—not too soon.

You will realize from these comments that I enjoyed many conversations with this admirable man. He was impeccably courteous and I got accustomed to the kind of exchange when I would mention someone and he would smile and say: "Oh that was a wonderful story. Have you never heard the great scandal about him or her?" and I would instantly sit up waiting for some revelation, only to find that it was the most charitable and understanding remark. Even about Oxford, where he had studied at Lincoln College and never lost his devotion and loyalty. He was *homo naturaliter Oxoniensis*. Like many of its graduates, he could never quite get over the experience of having been there.

Another aspect of his life that meant nothing to me but which meant a great deal to him was his time in the army. He had served in the Royal Artillery, in Tunisia, Italy and New Guinea, and as a commissioned officer served at

nuances of speech or the expressions of the participants. It is also that the text these days is so lauded—the grammar polished, sentences rewritten, and whole chunks left out, to say nothing of the rewrites performed by members who slip upstairs to check the transcript of their remarks. The pity of it is that no one actually listens to most debates.

It takes something like the hanging debate to remind one that the chamber is still important. It is fashionable to heap praise on the new select committees—especially when they proved more telling critiques of the Government than the opposition. Not that either front bench seems inclined to re-establish them quickly in the new parliament.

To a limited extent the Committee system can provide an effective scrutiny of bits of the Executive. But attitudes can still be fashioned in the thrust of general debates in the chamber, to say nothing about individual reputations. This is where they are still made or lost. John Nott never recovered from his first disastrous Falklands speech. And Leon Brittan's reputation will now never be quite the same again.

The Home Secretary's stance on terrorism focused attention to a greater degree than in the past on that most questionable part of the case. In the debate on Wednesday the flaws were ruthlessly exposed. Well over 50 Conservatives, including 12 of the new boys, abstained, though my impression is that virtually all of these had in the past backed the restoration case.

The scale of the defeat took us all by surprise. From my own recent experience of constituency selection committees, capital punishment was this time more than ever a hippy trick. I would not be surprised if 90 per cent of the new intake had taken the hanging oath.

Lessons to learn from a listener



Patrick Nuttgens

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Commitment lacking among the new MPs

Yet members heeded the arguments. Though there may be quite a few reports back over the next few weeks reiterating their commitment to principles while emphasizing the many impracticalities that had been brought home to them.

For the first time there was a steady and impressive build-up of pressure from the abolitionists. The establishment began to march, the judges, prison governors, police chiefs—and a few academics. Suddenly an MP's mailbox had more letters for than against abolition.

What a tragedy that education cannot mobilize such authoritative opinion on a wide enough basis to change the climate of debate. It is not just that a few have fallen again—with the bigger battles to come in the autumn—or that the world outside the education service will accept them with hardly a murmur. It is that in so many quarters one hears nothing but disparaging comments about quality, attitudes, the fact of the matter. Before long the Manpower Services Commission might as well move into Elizabeth House.

Just take the attitude on the Conservative side of the Commons. Three hundred and ninety-four people, 100 of them keenly ambitious and eager to make a mark. The hanging vote might indicate that they are as frightened as was forecast. So what happens in the elections for the backbench committees? There were heated elections for the offices of the defence, foreign affairs, Treasury and so on for most committees. Not for education however. All posts were uncontested and a bit of arm-twisting was necessary to find a secretary. This is not to say that the new officers are not first rate. One just does despair at times.

my staff headquarters in Australia. Like his loyalty to Oxford, he never lost his loyalty to the army. After the war he continued his association as colonel of the Leeds Rifles. That led to a happy occasion when he had to persuade a regiment to vacate a large barracks so that it could be demolished and replaced by the buildings that became the college of technology and are now part of the polytechnic. I suspect that the old barracks were a better piece of architecture than the present polytechnic block, but he got his way by dressing up in uniform and calling on the colonel to make his point. What a loyal lot these army people are. I shall never understand them.

What I started out by saying was that the generation of post-war education officers was a golden one. It may be that local authorities had not yet woken up to their powers or it may be that they were all ambitious and full of optimism or even reckless. Whatever the motivation, they made some very interesting appointments, of a kind that it is difficult to imagine being made today. Candidates were always odd and fascinating, apart from it, there seems to have been few regions where more adventurous appointments were made than in the north of England, especially the three ridings of Yorkshire, now dispersed and disowned as a result of local government reorganization. I got to know the education officers when I joined the little team that set out for the wilds of York to found a new university. In awe of them for many months, I soon discovered how independent they could be and how firm in friendship. It was always said that the counties had a better record in education than the county boroughs and I think that was right; they had more continuity, and the education officers had more independence and as a result more originality.

Of the county boroughs, Leeds nevertheless always had a good reputation and its chief education officer, notably George Taylor and then John Taylor (at one time it looked as if you had to be a Taylor to get a job) were influential figures. I got to know John well because it was he who established on one central site the colleges that became the polytechnic, set up the polytechnic itself and encouraged me to apply for its directorship. It may be partly because we were such opposites that we worked together so happily. On retirement he became chairman of the polytechnic's governing body, exercising the shrewdness and judgment that I had come to know and respect—a quiet, dark-suited, bowler-hatted figure with a rose in his buttonhole, a symbol of reliability and the courtesy of local government at its best.

Professor Gareth Williams pointed out (*THES*, July 1) the need for a choice of course to suit individual students. Buckingham, in offering that choice, is careful to put heavy emphasis on interviews and an applicant's potential before offering a place. In a procedure totally unconnected with the UCCA system.

Why should Mr Webb try to prove a negative, when proof positive—with honours—is available?

Yours faithfully,
JONATHAN ROBINSON,
School of Law,
University of Buckingham.

Blacksmiths
Sir, — Your caption to the photographs of blacksmiths at work (*THES*, July 1) gave a most misleading picture of the state of the craft and of the opportunities for education and training in it.

Blacksmithing is not so much a "dying trade" (the Council for Small Industries in Rural Areas knows of more than 1,000 smiths in rural England alone) but a very isolated one. Until five years ago British smiths were a body of workshop-trained craftsmen drawing their inspiration largely from eighteenth century models and out of touch with other blacksmiths, in this country and abroad, with architects, designers, the higher education system in art and design and current developments in the visual arts. To combat this, the Crafts Council organized an international experimental workshop four years ago which was followed by a major "international conference" for 150 smiths at Herefordshire Technical College in 1980. Artist blacksmiths from all over the world came together for the first time and through an intense exchange of ideas and information injected new life into their craft.

Spurred on by the Crafts Council's initiative, British blacksmiths formed BABA, (the British Art Blacksmiths Association), whose activities include a bi-monthly magazine and an annual international conference. In 1982 the Victoria & Albert Museum

Shorter degree courses

Sir, — In reply to Dr Gareth Williams' letter of July 1 the paradox of expanded knowledge and contracting degree courses remains. What is more important is that this particular, and fundamentally peripheral, component of the Leverhulme proposals should not dominate discussion. In the context of a first general degree which is to serve both as a first step in the tertiary studies of the most able and the totality of that education for a probably larger group, just what ought such a programme to comprise. Dr Williams' suggestions too readily turned back towards the established vice of premature specialization. My own experience with general degree courses, as well as some interpretations of the Scottish experience, suggest that reintroduction of a compulsory and diversified core at least worth discussion. What about philosophy, mathematical and computational methods, reading knowledge of a foreign language, and the use of English as a starting point for such debate?

Yours sincerely,
PETER PERRY,
Reader in geography,
University of Canterbury,
Christchurch,
New Zealand.

Sir, — It would be a pity not to point to a flaw in Mr David Webb's letter (*THES*, July 8) on a two-year degree. Surely no objective discussion should ignore cogent empirical evidence from the University of Buckingham, where I teach.

Mr Webb mentions "less learning". Our four terms of 10 weeks every year provide a total of 80 weeks over two years—no loss, and arguably a gain. In my experience, our students use vacations to relax and yet maintain a basic momentum generated in small tutorial groups. The honours degrees awarded show what is possible when academics stop speculating as to what might be, and instead subject themselves to the acid test of success or failure in practice.

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School of Law,
University of Buckingham.

bravely organized the first international exhibition of contemporary ironwork in Britain "Towards a New Iron Age", which was supported by an international programme of demonstrations and is now touring the United States.

As for education and training, the apprenticeships and short course programme run for many years by CoSIRA have now been supplemented by other opportunities: Camberwell School of Art & Crafts in London and West Surrey College of Art & Design, Farnham, now include forged ironwork within their BA Honours courses in metalworking and Herefordshire College of Art offers blacksmithing in its higher diploma course in small studio practice. Adult education courses are offered in West Dean College, Chichester, and elsewhere. Blacksmiths are even beginning to work in schools, as Craftmen in residence, as is the case at Sevenoaks School, Kent, or for shorter periods through "Craftpeople in Schools" schemes.

In 1983 British blacksmithing is alive and full of potential. Anyone wishing to find out more about the activities and opportunities described above is urged to contact us at the Crafts Council.

Yours faithfully,
CAROLINE PEARCE-HIGGINS,
Education officer,
Crafts Council,
12 Waterloo Place,
London SW1.

LETTERS TO THE EDITOR

Reforming the electoral system

Sir, — When I wrote (*THES*, June 24) to draw your attention to the now-forgotten system of double voting and two-member constituencies which existed in this country down to the nineteenth century I did so as an additional note to my article (June 10) on the history of third parties. In writing that "I draw no conclusions from the above points, though your readers might like to do so" I hoped that my letter would be taken as it was intended, as making a point of historical interest which might give a historical dimension to the current discussion of proportional representation.

I was thus a little surprised to learn from Brian Meek's letter (*THES*, July 8) that I had "seriously advocated" a multiple vote system of this kind. However, I do feel out of sympathy with his dogma that "The only system which in practice gives reasonable assurance of some local link with an MP with which one might feel some sympathy (and who might feel some sympathy for you) is the single transferable vote in multi-member constituencies". As Mr Meek does not feel "in the least represented" by his present MP it is difficult to see how the much more tenuous relationship between constituents and parliamentary representatives elected under a transferable vote system can satisfy him in this respect.

Two particular misconceptions appear in his letter. The first is that the traditional form of double voting was "rejected by supporters of electoral

reform and fair voting". In fact the impetus for the elimination of two-member constituencies came about in the first Reform Act almost by chance. The Whigs who devised that measure had no objection to such a system *per se* but resorted to the tactical device of depriving some marginally low-franchise constituencies of one member, rather than two, in order to reduce opposition to the bill.

As to the "myth" supposedly present in my assertion of the ancient principle of a close personal link between British constituents and their members I refer to the classic study of *The Unreformed House of Commons* by E. and A. Porritt (1939) where it is stated that the early records suggest "that, in the first three centuries of the representative system the political relations were in some respects not unlike those of the present day, when members of the House of Commons are expected to review the work of each session, and to give their constituents an informal opportunity of passing judgment on their parliamentary conduct" (vol. 1, p. 258).

Just as I tried to point out that third parties are far from being a uniquely modern phenomenon, may I renew my plea for a more open-minded approach to the problem of representation which, while seeking to overcome the type of injustice done to the Alliance in the last election, will also endeavour to keep some of the traditional advan-

tages retained in the present single-member system from the one it replaced.

Yours faithfully,
BRIAN HILL,
School of English and American Studies,
University of East Anglia.

Sir, — In *The Theory of Committees and Elections* (1958) Duncan Black identified a major anomaly in our current electoral system, and I believe in all the alternatives proposed. "The voters do not receive the further option that they return no member" (page 4).

Under the present system there might be 100 registered voters in a constituency, who then vote: candidate A, 30; B, 20; C, 15. There are 35 abstentions, a majority, and no candidate should be elected. If the citizens of Eatenwill are not sufficiently interested to vote, or if the candidates and policies are not sufficiently attractive, then this decision is fair. This argument applies not only to elections for Parliament and local government, but to all elections and colleges. Some of L. Dodgson's writings are relevant to the latter group.

Yours faithfully,
D. N. BAYRON,
Royal Free Hospital School of Medicine,
University of London.

and polytechnics. Therefore, there is not a direct comparison to be made between arts equivalent costs and the figures I have used.

However, the graph at the head of your article would seem to indicate very close agreement between the figures I have quoted and those of the DES. Thus, the arts equivalent figures for unit costs in science for 1982/83 and £5,500 for universities and £3,400 for public sector institutions. The comparable arts figures are £3,450 in the universities and £2,400 in the public sector. This would suggest a difference between the two sectors of the order of £1,500 per student.

Yours faithfully,
R. M. W. RICKETT,
Director, Middlesex Polytechnic.

non-university sector". The polytechnics' dominant role in advanced work, including research and consultancy within the public sector, is already well established, and well known. "Ground rules"—clear policy statements relating to the steps necessary to ensure that the essential strengths of the public sector of higher education are maintained and enabled to respond to the needs for change—are however essential by the effective conduct and appraisal by the board and the committee of the current planning exercise. This was not "set in the way" the urgent job of detailed "rationalization" to which you refer. It would, however, do something worthwhile to contribute to its quality.

Yours faithfully,
WILLIAM BIRCH,
Director, Bristol Polytechnic.

half-century, Virginia Woolf, whom Robert Skidelsky quotes elsewhere in his article, surely put the matter better when she wrote that, unlike fiction, "biography is bound by fact".

This simple statement is deeply misleading and unintentionally derogatory to fiction, from which biography has gained many of its liberties in the last

the money to carry out the recommendations would be found.

I look forward to seeing further discussion of the issues raised in the report in your columns; constructive public debate will assist the Government in preparing its response.

Yours sincerely,
SIR HENRY CHILVER,
Chairman of Advisory Council for Applied Research and Development.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Union View

Time to bridge the gap between the sectors

At its meeting on July 12 the National Advisory Body's board had before it a DES paper on inter-sectoral comparisons between the public sector higher education and the universities.

There has, of course, been pressure from the public sector for many years for the publication of such a paper and the department is to be congratulated on finding a way around obstacles which DES officials have previously found insuperable. No doubt the knowledge that there was intense pressure in the NAB board for such a paper and that, if the DES failed to produce such a document, the NAB secretariat would be likely to do so, greatly assisted the department in its task.

The paper is a useful starting point for a serious debate on higher education unit costs, although the methodology of the paper must be open to question on a number of counts, especially perhaps in the way in which it deals with research.

The costing of research in the universities, on which the figures in the paper are based, was done by a means of self-assessment questionnaire completed some years ago by university teachers for quite other purposes. University staff assessed their research activity as 30 per cent of their time; the department reduced this to 25 per cent. However, the DES felt it was "too difficult" to devise a comparable proportion for the public sector, so no allowance was made for the considerable volume of research activity in the polytechnics and colleges.

natfhe

Nonetheless the message of the paper is clear—the disparity of funding between the sectors is wide and getting wider.

Natfhe has argued consistently for many years that the funding of equivalent courses should be at the same level, irrespective of the institution at which the course is offered. It has never been suggested, by the DES or anyone else, that this suggestion is unreasonable. On the contrary, in the past the department has always claimed that the funding of higher education across the binary line has been "even-handed" and that discrepancies between the public and university sectors were apparent and not real; they were merely the result of different methods of fund allocation.

The DES has now itself devised a method of comparing costs which, whatever its short-comings, is more accurate than any we have had in the past and the evidence clearly shows the difference between universities on the one hand and polytechnics and colleges on the other.

New public expenditure reductions have been announced in the past few weeks; there are rumours of yet more for the autumn. It is Sir Keith Joseph's responsibility to ensure that if these public expenditure reductions take place, then public sector higher education is protected. The system is already under-funded, as those who are part of that system have maintained for many years. If the students within that system are to have their education protected then we must have more money not less in order to provide adequately for them.

The Government believes in supporting and encouraging cost-effective services. The DES has itself demonstrated the highly cost-effective nature of the public sector. Perhaps we can now expect the Government to put some of its money where its mouth has been for so long?

Janey Rees

The author is education secretary of the National Association of Teachers in Further and Higher Education.

SSRC increases competition awards

by Paul Flather

The Social Research Council meeting in Cambridge last week has approved plans to allocate 350 of the 725 post-graduate awards on offer in 1984 by "open competition" among students, a huge increase on this year's 243 open awards.

Members approved a detailed paper outlining the new divisions in how the awards are to be distributed for the next four years. The paper also discussed the new American-style PhDs on offer, and the number of awards each of the six topic committees will be able to award to universities.

The increase in "open awards" requested by ministers last October meant the SSRC had to knock down the bids put in by each of the committees by an average of one in five, although it was not done pro-rata. The industry and employment and environment and planning committees have come out worst.

The final total 410 so-called "quota awards" for 1984 are divided as follows: economic affairs 54 (bid 70); education and human development 38 (bid 58); education and planning 97 (bid 112); government and law 40 (bid 53); industry and employment 107 (bid

121); research resources and methods 14 (bid 17); social affairs 60 (bid 95); 15 awards are held in reserve.

Members also approved in principle the new style "doctoral programme" awards - involving taught elements covering research methods, plus greater supervision and regular assessment. But they decided to allow more time for committees to fix detailed requirements before launching the awards fully.

The paper highlighted arguments for coming out boldly in favour of the programme right away, while on the other hand pointing out the need to hold back while definite criteria for evaluating bids for research were fixed. There were 33 doctoral programme bids put up to council. They would be awarded by committees to institutions able to run proper taught courses.

At present only one doctoral programme, management studies at Aston University, has formal SSRC recognition, winning four awards a year.

The council is to maintain the number of linked awards, given to students who are attached to an existing research project, at about 20 of the total, the same as at present.

Illsley urges strategic role

A discussion on future research policy was partly provoked by a controversial discussion paper presented by Professor Raymond Illsley, chairman of the social affairs committee of the SSRC.

Under Professor Illsley's ideal system, the SSRC would adopt a strictly strategic role, channeling almost all its funds into specialist centres based in university departments best able to exploit and develop research ideas in the chosen field.

The aim would be to create a network of social science research centres, modelled on the current Designated Research Centres preferably involving adjacent universities and polytechnics collaborating to form joint research centres.

He notes some of the dangers of "creating sleeping monarchs in monopolies", and of leaving little over for new individual research grants, but it would reduce SSRC overheads, and create long-term secure research bases.

This would particularly help university researchers who suffer from short-term contracts and great insecurity. Professor Illsley headed a long inquiry for the SSRC completed last year into the careers of researchers which highlighted these problems.

The report analysed the need for research continuity. In terms of scientific scholarship, assets, and dissemination of ideas. "Our present system is not well suited to these needs. It encourages brief projects and brief careers," Professor Illsley said.

His paper was taken with another paper outlining proposals to move away from supporting long term units in favour of designated research centres with eight-year lifespans. The SSRC is negotiating with universities to hand over control of its four research units. The report on research careers is to be re-examined by the council later.

Initial idea, final decision

The Social Science Research Council is to petition the Privy Council to change its name to the Economic and Social Research Council.

The change was endorsed by the required two-thirds majority at last week's council meeting and it is now a formality that the new name will be agreed.

The issue has been discussed at at least three previous council meetings, and as before, members expressed considerable concern about the academic and intellectual implications of any change.

But having already acceded to the view of the SSRC chairman, Mr Michael Posner, that they were duty-bound to drop the word "science" from the title as requested by Sir Keith Joseph, the Secretary of State for Education, they accepted that no better alternative names had emerged despite a trail of the academic community.

In the end strong opposition to the change was confined to one or two council members. Including Sir Frank Cooper, former permanent secretary at the Ministry of Defence, recently appointed to the SSRC after a long tussle with the Prime Minister's Office, and ironically just created a Privy Councillor himself.

Sir Frank, voicing a view still widely shared among social scientists, felt there was really no need for a change. But many social scientists have also conceded that in the end it is probably a small price to pay to keep the SSRC, and the peace between ministers and the council.

Everyone would have preferred the name to be the Social and Economic Research Council but the SSRC acronym has already been claimed. Social scientists can hardly start protesting now, having remained so quiet since the SSRC was first proposed in May.

Biotech company blossoms at last

by Jon Turney
Science Correspondent

The Agricultural Research Council and the British Technology Group this week launched their long-awaited biotechnology company, which will exploit work in plant genetics.

The Agricultural Genetics Company, closely modelled on the Medical Research Council-linked Celltech, starts out with £700,000 from its three main backers - the BTG, the oil company Ultramar, and the venture capital arm of Advent Technology Ltd. The founders plan to increase the firm's working capital to £15m in the next few years, with help from other private sector investors.

The chairman and chief executive of the new company, Dr Alan Robertson and Dr Roger Oilmour, have also

taken personal stakes in it. Dr Robertson is a former chairman of ICI's plant protection division and Dr Oilmour has returned to the UK from America, where he ran a food technology company.

The company's agreement with the ARC gives it first call on council work in genetically-engineered crops, plant pest control and bacterial inoculants. The Department of Trade and Industry has still not announced a decision from a review of the BTG's general right to exploitation of publicly-funded research - but the new research council-company agreement will stand whatever happens more generally.

This goes against the advice of the House of Commons Select Education Committee on Science and the Arts'

report on biotechnology last year, which recommended that Celltech's exclusive agreement with the MRC be reviewed and that the ARC should not enter such an arrangement.

The company will be based in Cambridge initially, close to the ARC's Plant Breeding Research Institute. Dr Ralph Riley, the council's secretary, said there would be no change in the ARC's scientific programme. If the new company needed research for commercial projects, it would be commissioned in the normal way.

Dr Riley said the ARC was one of the major international sponsors of plant molecular biology and was well up with the leaders in areas like incorporation of bacterial genes into plant cells.



The Duke of Westminster presented a team from Ealing College of Higher Education with a cheque and a trophy after they won the national business quiz sponsored by Lloyd Bank. The team was (left to right) Christopher Stone, Mark Hutchinson and John Anderson.

Local opposition collapses to Ulster merger plan

The charter and statutes for the University of Ulster - the merged University of Ulster and Ulster Polytechnic - are likely to be agreed next month following the collapse of local opposition to the merger.

NUU's council will study the final draft of the two documents shortly, and will give its last suggestions to the steering group overseeing the merger when it meets on August 12. But the steering group is most unlikely to pass them on to the Privy Council until it is sure that NUU's court will repeat its vote of support for the merger when it meets on September 16.

The support in the court meeting last week was overwhelming: 96 per cent of members present and voting supported the special resolution asking the Queen to grant a new charter and repeal NUU's charter.

The resolution only needed 75 per cent support, although it must gain that level again in September or last week's vote is invalid. But the voting by 95 court members for the resolution, four against and 16 abstaining was in complete contrast to the June meeting of court when only a 63 per cent majority - 71 to 41 - was achieved in favour of the resolution.

Staff at NUU and officials at the Northern Ireland Department of

Education were pleased and relieved that the court's rearguard action - mainly affected by local business and political representatives - was not repeated, despite protests by Mr William Ross, MP (London/Derry East) in the House of Commons.

According to Mr Ross, the implied costs of the merger - transferring staff between pension schemes, travelling between sites, maintaining support to Queen's University - are much higher than Government estimates.

"From where will the money be found?" he asked. "Will there be an massive cutback to student numbers? Will there be a further rationalization and closures? Where will the cash come from? Those are not light questions, but questions which the university (NUU) asked from the first hour that the merger was proposed. They have not been answered."

The place to debate the closure of NUU was the House of Commons, not Northern Ireland, he said, under a Bill that could be debated by MPs.

"The people of Ulster and those interested in higher education in the United Kingdom generally should be very interested in the small, weak institution that is being butchered in Coleraine."

Government gets £12m training bill

by Patricia Santinelli

The Government has been asked by its advisory body on teacher training to provide up to £12m a year by 1985/86 to train all new further education teachers.

The recommendation was agreed last week by the Advisory Committee for the Supply and Education of Teachers after the Department of Education and Science gave local authority representatives an assurance that this would be new money and not deducted from the advanced further education pool.

The local authorities has said that unless funding was really new, they would not be prepared to redirect funds currently being spent on the release of further education teachers for initial training into the Youth Training Scheme and education management. This was part of proposals put forward by ACSET further education sub-committee.

ACSET's argument is that unless specific funding is provided, the current position where only 3 per cent of new entrants to further education teaching are released for initial training will continue or deteriorate further. This view is supported by results of a recent HMI survey which showed that some authorities and institutions give no priority to the untrained new entrants. On the contrary they use release almost as a reward to those with five, six or even 10 years experience of teaching.

ACSET wants the Government to provide the funds to enable all untrained entrants, estimated to be about 2,000 a year, who have less than two years teaching experience to take a two year certificate in education (CE) course. In a full year this would cost £6m.

The committee has, however, fought shy of recommending the introduction of formal training for all further education teachers. It says that recommendations on this subject will be submitted later.

The Association of University Teachers has lodged a strong objection to the proposed composition of the new national advisory council for the accreditation of teacher training courses.

This will be the third time that Professor Bill Wallace, the AUT representative on the committee has objected to ACSET's recommendations to the Secretary of State for Education. The new council was agreed by the committee last week. Professor Wallace however, in a dissenting note, says he is not satisfied that the committee's composition will be representative.

Effective project

The Manpower Services Commission is giving financial backing to a project to help women managers become more effective.

The project was set up by Sheffield Polytechnic's department of management studies, plans to help establish small self-development groups for women in management.

These groups will be led by women trainers and it is hoped to set them up in the fields of manufacturing, banking, education, local government and community work.

Battle over merger plan

The London School of Hygiene and Tropical Medicine is fighting a university decision to move its department of nutrition to Queen Elizabeth College.

The School of Hygiene and its allies have protested strongly about the recommendation from London University's joint planning committee that the department should be amalgamated with the department of food science and nutrition at Queen Elizabeth College.

Although the recommendation has been approved by the university's senate and court, the fight could be successful. Professor Charles Gordon-Smith, dean of the School of Hygiene, said this week that he understood the joint planning committee would reconsider the issue in the autumn.

The committee's original proposal followed a subject working party in the university, which said that amalgamation of the two departments was one possible option. The committee took up this option against the advice of the School of Hygiene, and it was passed by the university senate as part of London's overall restructuring package.

The school tried to persuade the university court to refer the recommendation for further discussion, but court also approved the recommendation. School sources say that the university was reluctant to re-open the question because it wished to present a completed package to the University Grants Committee this year.

However, officials have now indicated informally that the issue will be looked at again, although the school has not yet had notice of this in writing. Outside pressure helped to keep the department's hopes alive - a number of eminent medical authorities are understood to have written to London's vice chancellor, Professor Randolph Quirk, protesting at the original decision.

Staff at the school were also strongly opposed to the move. One senior staff member said: "We object not only to the decision which was made but the way it was made." Members of the nutrition department argue that the university's proposal takes no account of London's importance as the main national centre of nutrition teaching.

Croydon peace negotiated

Dismissal notices to 300 lecturers at Croydon College have been withdrawn after negotiation of a compromise formula on extra teaching hours.

All staff are to be time-tabled for an extra hour of class contact from September. Negotiations are to continue on the question of the teaching load of staff recruited at the start of the new academic year and other conditions of service issues.

Staff had previously rejected a compromise which would have meant an extra hour for existing staff and an extra two for new recruits.

Unions and negotiators are likely to resist the introduction of a differential for new and existing staff, but both sides have declared their intention of reaching agreement by October 31.

Improve 'new blood' quality, orders UGC

continued from front page

£23.5m of the reduction in the 1983/84 cash limit would be achieved by reducing the amounts set aside for restructuring, redundancies and rates, which had proved to be set at a higher level than necessary.

But many institutions had already laid plans for diverting resources to other projects and Sir Keith has now forced them to postpone or abandon them.

With a reduction of £1.1m in the Open University budget, but setting aside £1.5m from the contingency fund for the cost of bridging the gap for the clinical academics' salary award, the net reduction is £23.1m.

The voluntary colleges and other direct grant institutions including the Cranfield Institute of Technology, the

HMI slams poly engineers

by Karen Gold

Broad hints that the engineering department at Bristol Polytechnic has little justification for remaining open have come in a highly critical report by Her Majesty's Inspectorate.

"There is little evidence of local or regional demand for mainstream engineering degree courses at the polytechnic, and it must be assumed that the two existing prestigious university engineering departments now in Avon adequately cater for these requirements," the report concludes.

In general, neither the style of teaching nor the nature of the accommodation and equipment is appropriate to undergraduate work. The department's part-time degree work hardly attracts sufficient students, while higher technician work currently done by the polytechnic could be done in other Avon colleges.

The strongest condemnation is reserved for the department's site, shared with Brunel technical college. "The environment is so poor that it is doubtful whether any up-to-date professional engineering can possibly take place on the site."

On one course, the technology with industrial studies degree, student performance gave cause for "extreme alarm". Most students on that course had low A level entry grades, and from the 1978 intake of 15 students only one passed first year exams at the first attempt.

More widespread concern is expressed about the department's "static and ageing" teaching force. "The corporate industrial experience within the department may be a decade or more out of date - apart from the work of the individuals who are actively engaged in research, many staff are not, in general, pursuing the development and understanding of their own subjects to a level to be expected in a department offering degree courses."

The report says: "Generally there was little effort or will to establish and maintain industrial contacts at a level and of a type that would contribute to the updating of the staff, help generate research, enhance professional credibility and stimulate teaching."

Any attempt to introduce a personnel tutoring system for students within the present facilities, with tutorial and

private study rooms "almost non-existent", would not be feasible. Currently academic tutorial arrangements for degree and HND sandwich students are already erratic, it says, while no formal arrangements for personal tutoring exist.

Students' project work and its supervision and assessment is praised. But laboratory work is again alleged to be affected by accommodation difficulties, with the distance between labs and classrooms acting as a disincentive for work in each of them to be linked.

Certain laboratories are described as well-equipped, although others are inadequately equipped or overcrowded, while the design studio is "grossly overcrowded and cluttered", needing at least twice the present space. The team of laboratory technicians is congratulated in the report for the upkeep of the labs and equipment.

The department's organization lacked cohesion and direction, and individual schools seemed to operate as separate units, the report says. It was also unusual in having part-time degrees in electrical and mechanical engineering without full-time degrees in those subjects.

OU courses face closure

by Felicity Jones

The Open University's pioneering U-courses are still under threat of closure in spite of a senate decision to refer a whole package of cost-saving proposals back to the academic board.

The plan to phase out the Inter-faculty U-area, which has overseen the running of the five courses for the past three years, and to shelve two new courses on Perspectives in Health and Disease and Conflict and Security in the Nuclear Age, had been agreed by the academic board.

But when the package was put to the senate as a proposal for saving a further £2,500,000 next year, the senate referred everything back to the academic board for the proposals to be more fully costed and for better justification.

A small group of academics in different faculties who compose part of the U-area sub-committee have been fighting the threat to the courses ever since it became known that the university's officers favoured the phasing out of this innovative cross-disciplinary area of study.

They believe that although the senate threw out the proposals this time it is quite likely that the academic board could put the same proposals forward to the November senate meeting with more detailed financial justification to support them.

One member of the group said they were threatened by the opinion expressed in the senate meeting last month that the U-area brought breadth to the university syllabus and reflected the spirit behind the OU. But university officers argued that the university should concentrate on single discipline courses for students who wanted specialist degrees.

There is also the fear that a decision to postpone the next senate meeting for two months could lead to back door cuts in the finance committee and council have executive powers to take emergency measures meantime. The announcement of the extra £1.1 million cut by the government in the OU budget next year could have some repercussions in this respect.

Research crisis solution

by Jon Turney
Science Correspondent

The best answer to the crisis in the dual support system for university research is to earmark University Grants Committee funds for research. A working party of the Advisory Board for the Research Councils has decided this is better than asking the research councils to increase their contribution.

The working party, which reported this week, was set up to meet a request from support of university scientific research. It is strongly in favour of earmarking even though Merston rejected this option.

The working party was so concerned about the dual support system, where the UGC grant theoretically provides enough research cash to sustain a modest research programme in each university, that they considered asking for all research money to be taken away from the UGC and distributed between the research councils.

Mr Dick Morris of the engineers Brown and Root, chairman of the working party, admits that some would see their comments on the UGC as outside their terms of reference. But he felt dual support was a good system which needed rescuing urgently. "There may be a bloody great row, but I think something should happen", he said.

On the specific question of the balance between research council spending on separate institutes and on backing university researchers, the working party concludes that there could be no set formula, as each council is different. But they had very little criticism to make of the existing pattern of spending. The report estimates that over 30 per cent of total expenditure by the five research councils goes on university support.

It records the view of university researchers that research council institutes have been protected from spending cuts, and calls for measures to reduce mutual suspicion and misunderstanding between the two worlds of the academic research community. Specific recommendations to promote collaboration between universities and outside institutes include more short term research council appointments to promote staff mobility, and encouraging institute staff to lecture and supervise students in universities. A "research community" in a particular field should be the goal, the report says, and it singles out the Science and Engineering Research Council's Daresbury laboratory as a success from this standpoint.

The report also calls for each council to review its existing institutions, looking at their location and their interaction with the scientific community outside. And it says that any new institute or unit should only be established on a university campus.

The report makes no comment on the individual spending patterns of the five research councils, beyond emphasising that they all have different needs. This is seen as good news for those councils which spend most of their budgets on their own institutes, and so bear the brunt of university researchers' criticism. Dr Ralph Riley, secretary of the Agricultural Research Council, said: "This report can be construed as judging that ARC's practice of putting a large proportion of its money into its own institutes is appropriate."

The truth of this will be seen later when the Advisory Board for the Research Councils will decide whether to confirm a cut in the ARC's budget proposed last year.

The support given by Research Councils for in-house and university research, Report of a working party of the Advisory Board for the Research Councils. Available free from the Department of Education and Science.

Leader, back page.

HMI promotion

Mr Eric Bolto, a long serving member of HMI Inspectorate, has been appointed senior chief inspector in succession to Miss Sheila Browne who she retires in September.

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Training worries lecturers

by Paul Flather

Social work lecturers are alarmed by what they see as a drift by the Government towards an "apprentice" type of training approved social workers. Lecturers in universities and polytechnics in the Midlands have already voiced their concern following recent discussion of a letter sent by Mr Tony Newton, under secretary at the Department of Health and Social Services, to Mr James Pawsey, MP for Rugby and Kenilworth.

In his letter sent before the election Mr Newton states that while some staff need to hold the Certificate of Qualification in Social Work, "the majority need other forms of training, more job-related and less academically based."

The CQSW teachers fear that this spells out Government intentions to stress vocational elements in social work training, threatening the independence and academic input of courses taught in universities and colleges.

Mr Newton explains in his letter why the Government opposed a House of Lords amendment to the Health and Social Services and Social Security Adjudications Bill calling for mandatory awards for all social work students.

He states that 70 per cent of front line social workers already hold the CQSW, and that the proportion will continue to increase. But the need is to provide more residential and day care service training and this type of training would not be suited to a system of mandatory awards, Mr Newton wrote.

Mr Bernard Davies, a lecturer in applied social studies at Warwick University, who convenes the Midlands group of CQSW teachers, said the letter could be taken as another sign of the vocational emphasis favoured by the Government.

"We are concerned that ministers want narrowly based and conceived social work courses almost on the old apprentice model, this is already happening in the teacher training and youth training fields," he said.

The matter is to be discussed further at the next national meeting of CQSW teachers and it is likely they will seek a deputation to express their concern.

County drops fee plan

Cheshire county councillors have shelved plans to charge 18-year-old students fees for further education courses. The county council last week deferred a proposal that the age of remission for fees should be reduced from 19 to 18 in the face of determined opposition. The National Association of Teachers in Further and Higher Education has warned that students might be forced to give up their studies.

The union calculated that fees could be as much as £294 a year with additional heavy examination fees. At the moment students under 19 at the beginning of their courses are excused fees and the NAFHE estimated that more than 1,000 would be affected.

The proposal is not dead - officials are expected to examine the arguments for and against over the next year. A prime reason for the decision was that the authority does not operate educational maintenance allowances - and it is likely that strong pressure from the Liberal group on the council will put this on the agenda when it reconsiders the policy on reducing the age at which fees are charged.

Mr Judith Summers, secretary of Northern Education in the county, pledged continuing opposition to the policy. Educational maintenance allowances would only offer a partial solution, because it would introduce a means test, she said.

"The service in Cheshire must be funded sufficiently to allow all who can benefit from further education to do so - and this is what the council has to face up to," she added.

The decision not to implement the policy this year adds to the county's already serious financial plight. Its further education service is expected to overspend significantly and it has been simultaneously lost a possible source of income and lost its share of the

Strathclyde to fight college takeover

by Olga Wojtas

Scottish Correspondent
Strathclyde Regional Council has warned that one of its colleges could face closure if it is transferred to direct Government control. The council is set to fight the Secretary of State for Scotland's plans to take over Bell College of Technology in Hamilton.

The government also intends to take control of Glasgow College of Technology and Napier College in Edinburgh. But Strathclyde and Lothian regional councils seem unlikely to put up serious resistance since these colleges concentrate on advanced and degree-level work similar to the central institutions run by the Scottish Education Department.

Mr George Bain, Strathclyde's deputy director of education for further

education, said Bell College was not a true central institution. Although 90 per cent of its courses were at higher diploma level, it did no degree work. "I feel therefore it would be a mistake to transfer Bell and we might well be making representations to that effect," he said.

Dr Malcolm Green, chairman of Strathclyde's education committee, said it was vital to have a college in the Hamilton area, particularly since the closure last year of Hamilton College of Education. Strathclyde's policy was to make colleges local and if Bell College were transferred there would be no local provision in Hamilton and East Kilbride.

If Bell College comes under central control, the Scottish Secretary will determine student intake. Dr Green

predicted that the transfer would be a prelude to closure. The college was likely to be linked with the nearby central institution, Paisley College of Technology, run down and then closed as had happened with the former Craiglockhart College of Education.

Mr Ronald Young, secretary of Strathclyde's ruling Labour group, said that staff were likely to oppose the move. While in the past they might have been glad to be rid of local authority control, the world had changed and Bell had been enjoying special support from the region while courses were under threat at Paisley. "Staff must be running scared," he said.

Mr James Gilchrist, chairman of Lothian region's education committee, welcomed the transfer of Napier Col-

lege, saying it was more appropriate as a central institution. Undoubtedly Lothian's view has been coloured by the Government plans to transfer the present central institution, Leith Nautical College, to the region's control.

Mr Gilchrist said he hoped to see Leith College move away from its nautical base and become more of a further education college.

But other central institutions have criticized Leith's transfer. They say it runs national courses and should be run centrally. Dr Alan Watson, Leith's principal, said despite a downturn in the nautical market, Leith had increased its turnover by 10 per cent. He urged the Scottish Education Department to adopt the American maxim: "If it ain't broken, don't fix it."



Lord Hailsham receives the charter from Sir Neville Leigh

The seal of approval

Sir Keith Joseph, the Secretary of State for Education, has firmly restated his belief that a vigorous and high quality independent sector is crucial for the development of education in Britain.

Sir Keith's views came in a message of support sent to the University of Buckingham last weekend and read out at a ceremony to mark the installation of Lord Hailsham as the university's first chancellor.

There were also messages from the Queen, and the Prime Minister as the Royal Charter awarded to the university - the first to an independently financed university this century - was formally handed over to Lord Hailsham by Sir Neville Leigh, clerk to the Privy Council.

Sir Keith's message said: "It has given me great pleasure to see the way that the independent university project has developed over the past decade, of a time when it cannot have been easy to launch an initiative of this kind."

"I believe that it is crucial for the development of education in this country that there should be a vigorous and high quality independent sector cater-

ing for all ages of pupils and students. The establishment of an independent university is thus an important and exciting enterprise."

Sir Keith noted the creation of a two-year honours degree-level course as an initiative of "great interest", and he described the granting of the Royal Charter as the "key to future development" rather than the culmination of 10 years' effort.

The university presented its first batch of honorary degrees to those who have helped establish it or inspired its scholars: Sir Ralph Balamian, an industrialist and first chairman of the management committee; Lord Belfort, the first principal; Mr Jo Grimmond, the patron; and to the two academic visitors, Sir John Kendrick, and Professor Francesco Forte, the Italian minister of finance.

Visitors had earlier watched the opening of the university's first purpose-built students' residential block, funded by a £400,000 gift from the Bernard Sunley charitable foundation. A second block of student residences is being built.

Stop talking, start linking, says GEC director

by Jon Turney

Science correspondent

Less talk more action should be the aim of those who wish to speed up university-industry collaboration. Sir Robert Clayton, technical director of GEC, told a conference on the subject last week. Speaking at the Cranfield/UMIST-backed conference on "Communication and collaboration between the Universities and Industry", he said "there have been too many reports, committees, inquiries, and even conferences on this subject." However, he conceded that the lack of action meant it was necessary to repeat the obvious to hammer the message home.

Action was necessary on both sides, he felt. It was up to industry to go into universities and find out what was of use, for if university researchers knew they would already have started companies themselves. At the same time, government must support universities properly, funding both people and equipment, or they would cease to be of interest to industry.

The conference at Imperial College, the second on the same theme in three weeks, also heard from Sir Alan Muir-Wood, the chairman of the recent Advisory Council for Applied Research and Development working party on industry-university links. He

found it "remarkable" that the three Government departments who needed to consider the problem in the long term - Defence, Education and Science and the Treasury - were not represented at the meeting. He hoped that the ACARD group's document was not "simply another report" and would finally make something happen.

Both Sir Alan and Tony Eggington of the Science and Engineering Research Council defended the council against criticism from the floor that it had failed to divert grant money to engineering research on any significant scale. Mr Eggington said that a suggestion from Professor Patrick McKenna of Cranfield that engineering gets a very bad deal from SERC was astounding. "Saying this is a gross disservice to SERC, ABRC and the DES, including the Secretary of State," he said, pointing out that SERC's funding for engineering had risen from 10 per cent to 30 per cent of its budget in the last ten years.

Dr Stephen Bragg, the SERC's regional industrial broker in Cambridge, said that while everyone agreed more money should go into such work, the council was in a good position to try out new ideas because they were run more or less on behalf of the Department of Trade and Industry, he said.

Ready-made go-betweens

The industrial research associations could do more as go-betweens for academics and industry if universities went to them for help, Dr Leslie Blske, director of the Construction Industry Research and Information Association, told the conference.

"I see the 40 or so research associations in the UK as important two-way links between universities and industry," he said. The associations had been set up and run by the different sectors of industry to meet their own needs, and so would be an excellent first contact for academics anxious to

place new ideas or inventions. CIRIA, for example, had around 600 members in the building, civil engineering and offshore and underwater engineering industries, along with 50 university and polytechnic members.

Dr Blske said a recent meeting of the Committee of Directors of Research Associations discussed the ACARD working group's report and decided to try and increase their help to universities. "It is now up to you to test the offer by approaching the research association in your own particular sector of industry," he said.



Dr Kathleen Anderson has been appointed deputy principal of Napier College, Edinburgh, the first woman to hold the post in Scotland's largest local authority college.

Dr Anderson is head of Napier's biological sciences department, has personally attracted more than £400,000 in research grants to the college and initiated a new laboratory and library. She will be in charge of

YTS trainees 'would not drop out'

Most young people would still participate in the Youth Training Scheme even if the allowances were not raised, according to a Manpower Services Commission report.

The unpublished report contains a summary of lessons and issues identified in a survey of seven pilot YTS schemes run by companies ranging from ICI (Wilsons) to Dewhurst (the butchers).

"Most trainees favour an increase in the allowance by about £4-£5 a week, but despite this few said they would drop out if it was not raised," the report says.

Last month the commission recommended an increase of £1.45 in the £25 YTS allowance but this was rejected almost immediately by Mr Norman Tebbit, Secretary of State for Employment.

According to the survey, the further education services must become more flexible in its timetable and provision of off-the-job training. Several management agents have complained that local colleges have not been able to alter their normal academic year to incorporate trainees who might start later than the normal commencement date, it says.

found useful by the majority of managing agents, mainly because it saved time and direct recruitment was found to be time consuming. But even here the report says that there should be greater flexibility in the recruitment criteria used.

For example, despite the efforts of the careers service as well as managing agents, it has proved difficult to recruit girls to places which offered training in non-traditional areas, although a few did enter schemes with a foundry or agricultural bias.

But on the whole, trainees did see the YTS as valuable in equipping them for future jobs, by boosting their confidence and providing them with life and social skills, as well as a platform for future training.

The survey did identify some anomalies in selection procedures. There was a tendency to look for higher qualifications levels when recruiting. There had also been some streamlining of trainees immediately after selection which had enabled some young people to follow more demanding courses at local colleges.

Concern has also been expressed about the amount of credit that may be

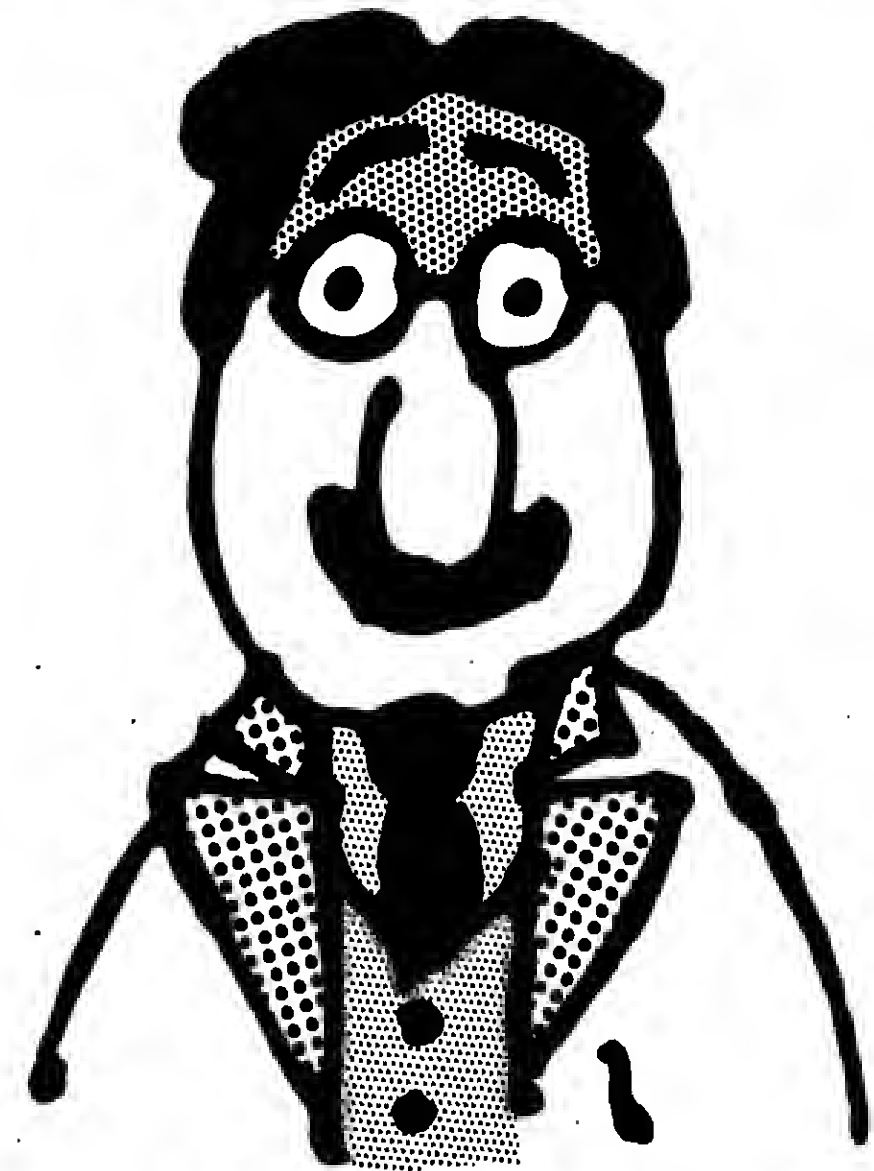
apprenticeship for trainees successfully completing the YTS course.

Newcastle's College of Arts and Technology can now remain open all year round to operate the YTS following an agreement between the National Association of Teachers in Further and Higher Education and the local education authority on how much time should be allocated to profiling and counselling on the scheme.

Ulster working party meets

The University Grants Committee working party on Northern Ireland has met for the first time. Members are: Professor Keith Clayton, University of East Anglia; Sir David Bates, Simsbury Institute; Professor P. M. Brimley, Manchester University; Dr Sidney Colson, Leicester Polytechnic; Dr Sidney Doherty, Northern Ireland Western Education and Library Board; Miss Anna Duffon, Oxford Library Board; Miss Anna Duffon, Oxford Polytechnic; Mr J. J. Mann, Northern Ireland Southern Education and Social Services Board; Mr John Sellers, ex-

AND WHO'S GOING TO BE IN CHARGE OF DRAWING UP THE CURRICULUM NEXT TERM?



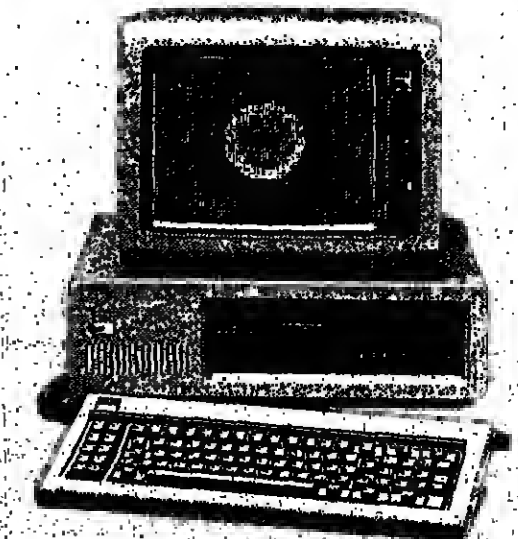
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Prison handbook rewritten

by Karen Gold

The Home Office is to rewrite parts of its handbook for prison education officers in an attempt to avoid future disputes over educational authority such as the recent ones in Holloway and Kingston prisons.

Officials have already begun redrafting key sections of the education officers' "Bible". Meetings will take place between them, education authorities which employ prison education staff, prison governors and the staff union, the National Association of Teachers in Further and Higher Education in the hope that changes can be introduced by the end of the year.

Two main changes are envisaged. One is a clear statement that education officers are responsible in the education authorities in education matters, though under the prison governor's authority in day to day matters.

The second is an effective dispute procedure: when an education officer will have to obey immediate instructions

from a governor, if the two disagree then the latter can take the complaint to the Home Office, and the former to the local authority.

The intention is to avoid head-on clashes between education officer and governor of the kind which has just been resolved at Holloway Prison in London, with the agreement that Holloway's chief education officer, Mr Richard Brown, should be allowed to return on August 1 to the prison from which he had been banned.

Mr Brown, who was not even permitted by the governor Miss Joy Kinsley to telephone education staff in the prison, was disciplined for keeping in contact with a former prisoner in order to help her with a university application. Mr Brown has now agreed to have no future contact with the prisoner. But the principle of contact with former prisoners, which education staff and others see as important for rehabilitation, has not been solved.

A temporary "operational brief" for

education staff and the governor at Holloway was drawn up by a meeting of the Home Office, the Inner London Education Authority, Mr Brown and Nathe. A fuller "professional brief" is currently being drawn up by ILEA, to be completed by September. Both will stress the shared responsibilities for prison education between the education officers and the general regime.

But with assistant prison education officer Ms Anita Bromley still in difficulties at Kingston prison, though no longer excluded from the prison, and no solution to the problem at Holloway in principle, Nathe fears that similar difficulties will arise again.

"We have had a situation in which work that is the responsibility of the local education authority has been destroyed, albeit for a period of time, by the whim of two governors," a Nathe spokesman said. "It's a great shame that in both cases there seems to be no policy underlying these decisions, just conflict of personality."

Overseas news Budget cuts report prompts criticism

from Benny Morris

JERUSALEM

The committee of the heads of universities in Israel has warned that this year's 5-7 per cent cuts in university budgets will cause lasting damage to higher education, research and, ultimately, to Israeli society.

The cuts for fiscal year 1983/84 are among the across the board reductions imposed on all government spending following the unexpected, increased defence outlays for the war in Lebanon. Government critics maintain that the cuts are also the result of the finance ministry's very poor handling of the Israeli economy, which has an annual inflation rate of 140 per cent and a \$12bn foreign debt.

The committee, composed of the presidents and rectors of the country's six universities and the postgraduate Weizmann Institute of Science, also fears that the major recent pay award to the country's public sector doctors will be paid for, at least in part by an additional university cut.

Committee chairman, Professor Ozer Schild, the rector of Haifa University, said the budget cuts "will undoubtedly lead to restrictions in the amount of research work here in Israel, which in turn will lessen the chances of new developments and discoveries. It will reduce our ability to exploit the scientific discoveries of other countries."

Schild said that at Haifa University, cuts will result in the loss of 15 teaching posts out of an academic staff of 350, and a similar cut in the number of

technical and administrative employees.

The warning came immediately after the publication of a 99-page report on the state of the universities, containing specific projections until 1988 and more general predictions about university development until 1995. The report was prepared by the planning and budgets committee of the Council for Higher Education, the government agency which supervises university budgeting and development and which represents the universities collectively in their dealings with the government.

Written in sober, formal language, the report affords a grim picture of the current state of affairs and an even more ominous prognosis, if present budgeting trends continue. (The government provides the universities, which are independent institutions, with something over 70 per cent of their budgets.)

The report notes that the portion of the state budget taken up by the budget for higher education has steadily declined, while the student body of the seven institutions, now totalling 62,500 students, has grown by 30 per cent over the past decade.

The report's main recommendations make confusing reading, in the light of the steady government cuts in university budgets. In order to function properly, says the document, "the budget of the higher education system must grow in real terms by 3 per cent and preferably by 6 per cent, in each of the next five years. A 3 per cent annual growth in budget in real terms will prevent further deterioration but will not improve the situation."

Professor warns of 'chaos'

from James Hutchinson

BONN

Professor George Turner, whose four year term as president of the West German vice chancellors' conference ends on August 1, has warned that Germany's university system is heading for chaos unless radical changes are made.

A consequence of overcrowding, he said, was that education in the old sense had been changed into vocational training. It was no use pretending that the system could provide the same kind and quality of education as it did when only a small proportion of school-leavers went to university.

Professor Turner pointed out that in the next decade some 35 per cent of school-leavers annually would be entitled to a university place. The present system simply could not cope with such an influx, he added.

"We can argue about which system is best," said Professor Turner, "but I am prepared to accept any system that does away with the present inordinate long courses and leads to graduation at a reasonable age."

Professor Turner, the vice chancellor of Hohenheim University, near Stuttgart, will be replaced as head of the vice chancellors' conference by Professor Theodor Berchem of Würzburg University.

House and Gardner

from Charlotte K. Beyers

PALO ALTO

The new president of the University of California, Mr David P. Gardner, is to buy a new house at a cost of more than \$300,000. In addition, Mr Gardner—who will pay \$250,000 towards the house himself—will receive an unspecified annual housing allowance and "funds to pay maintenance and utilities".

The balance of the purchase price will be loaned by the UC regents at an interest rate of 6.11 per cent. Mr Gardner's appointment on a \$120,000 salary—about 60 per cent more than his predecessor—has already sparked controversy on the UC campus, where students have been complaining about the rise in fees.

Gardner decided that Blake House, home of UC presidents since 1967, was unsuitable because it has only two bedrooms and does not provide sufficient privacy. The Gardner's have two daughters who will live at home and two others who spend part of the year at home.

A study of the most appropriate use for Blake House is now under way.

Collider approved

from Charlotte K. Beyers

A powerful linear collider that will slam electrons and positrons together at energies of 100 billion volts has just been approved by President Reagan. He signed a bill for \$32m of a total of \$121m for the new device which will be built at the Stanford Linear Accelerator Center on the campus of Stanford University in Palo Alto, California.

In this new machine, two beams from the existing two mile long linear accelerator will be bent around and focused into a microscopic spot. One beam will contain electrons while the other will be made up of positrons. When these particles collide, the original particles will be destroyed releasing the energy from which new combinations of subatomic particles will appear. The SLAC will produce these collisions at the highest energy level in the world.

The traditional method for producing these collisions has been with storage rings, in which magnets keep the two beams circulating in a race-track pattern, passing through one another millions of times each minute. The linear accelerator at the European Nuclear Research Centre (CERN) in Geneva was the first to use this method.



Mr Liu, director of student affairs at the university

Graduation day for China's child prodigies

by Peter Mauger

The Chinese University of Science and Technology in Hefei has just graduated its first juvenile class. In 1978 this university, perhaps the most prestigious in China, enrolled 92 exceptionally bright children under 16 years of age, running a special class for 20 of the most gifted, some of whom were only 11 or 12.

Diagnostic tests on entrance showed outstanding qualities of memory and comprehension but a lack of education in basic theory and an inability to express themselves adequately on paper. This was hardly surprising since most of them had barely finished primary school, and had concentrated on

scientific subjects, largely by private study.

They were given a special preparatory course before starting on the five-year university course proper. The student/teacher ratio of 2:1 (Hefei had at that time 2868 undergraduates and 1403 teaching staff), generous even by Chinese university standards, enabled the youngsters to be given an adequate grounding in general subjects.

Visiting the university in 1981 I was told that special measures were being taken to prevent an imbalance in their intellectual, physical, social and emotional development. Rest and recreational periods were carefully planned, there were regular medical check-

ups and they were sent home on holiday more frequently than the adult students.

Most of them specialized in mathematics and physics; to broaden their interests they had lectures every Saturday on various topics in dynamics, chemistry, biology, earth and space science, radio and electronics, and "sometimes" literature and philosophy.

Sixty six of the first intake (70 per cent) have passed examinations for graduate studies at universities and research institutes in China or abroad. Gan Zheng and Wu Yan, for instance, were second and fifth respectively in the physics exam given by Chinese and

American departments responsible for sending students to the United States. Xie Yanbo, enrolled at Hefei when 11 years old, is now a graduate student in the Theoretical Physics Institute of the Academy of Science—at the tender age of 16!

The experiment is still under close scrutiny; a teacher in charge of one of the special classes said that the feasibility of assigning jobs to such young people who are bound to lack maturity still needed to be tested. "We are evaluating the data," he said. The university now has 102 of these exceptionally gifted young students, and plans to enrol 25 more this coming October.

YTS study launched

Local authorities' contributions and problems in running the Youth Training Scheme are to be examined under a new project launched by the Further Education Staff College.

The project which is funded by the Manpower Services Commission to the tune of just under £50,000 aims to study and report on how five local authorities planned the final stages of YTS and its first year of implementation.

The five local authorities involved have not yet been named but they are expected to represent at least two metropolitan areas, the Shires and two London boroughs.

Essentially the project is intended to be collaborative whereby the FESC team will both study the YTS activities of the five authorities and support them by circulating information and analyses of their own and other YTS developments.

The project which runs until September 1984 will look at mechanisms for planning and programme development, the role of different local agencies, styles of control and administration, as well as reaction to MSC systems of funding, monitoring and administration.

It is hoped that in this way a fairly usable account of the way in which difficulties in running YTS can be produced which will be helpful to other local education authorities and give the MSC the information they require on how authorities cope with their financial system and monitoring.

ABRC posts

Three new members have been appointed to the Advisory Board for the Research Councils. They are Professor Peter Machin, professor of economic history at Oxford University, Dr Derek Roberts, director of research at GEC, and Mr Martin Wood, deputy chairman of the Oxford Instruments Group.

The new appointments complete the selection of five new members intended to strengthen the ABRC's independent expertise and its links with industry.

Importance of a child's view of computers

The way children use metaphors, models, and perceptual frames to interpret and understand knowledge could be radically altered by a world filled with computers and new technology, according to a new report.

The authors say that despite considerable investment in microcomputers very little attention has been given to the possible effects on children's learning and thinking and to their use in education.

They recommend the investigation of a specialized technology centre in Britain, possibly housed in a university or polytechnic, initially embarking on two main programmes: the effects of information technology on the curriculum, and on the learning process.

The report was commissioned by the Social Science Research Council from Dr Monica Singer, an electrical engineer, director of the computing cen-



A print by Edinburgh artist, Elizabeth Blackadder (right) is presented to the University of Edinburgh College of Art to mark the 400th anniversary of the university. The picture was handed over to Dr John Burnett, principal of the university (left) by Mr Ian Robertson, chairman of the college of art's board of governors.

NUS demands Iraqi inquiry

by David Jobbins

A demand for an official inquiry into allegations that the Iraqi embassy is approaching university registrars for lists of Iraqi students has been lodged with the Foreign Office by the National Union of Students.

In a letter to Sir Geoffrey Howe, the foreign secretary, NUS president Mr Neil Stewart claims that a circular letter to registrars seeking details of students' full names and their courses falls outside the boundaries of "normal" diplomatic practice.

NUS anxiety about the activities of people alleged to be connected to the embassy has been mounting over recent months.

An assistant cultural counsellor at the embassy, Dr R. Al-Madhihi, has been touring the country and anti-Government students allege he has been collecting information on the anti-Ba'athist Iraqi Students Society.

His brothers were detained after an attack on Iraqi dissidents in London this month. One, a student in the United States, admitted assault and was fined £23 and put on probation for

a year. But another brother, a diplomat at the embassy, was released.

This week, five Iraqi students appeared in court at Cardiff charged with causing an affray after an incident at the weekend. The students, three from Manchester, one from Leicester and one from the London area, were bailed to appear in court on October 3.

The Foreign Office has yet to reply to the NUS request, made after no response was received from the Iraqis to two letters.

The letter to registrars was signed by Mr Ali Hussain Hamdani, the cultural counsellor. The UK Council on Overseas Students Affairs pointed out to the embassy that in the past institutions had been unwilling to comply with similar requests.

Mr Stewart said: "We are seeking a positive response from the Foreign Office as any students coming under such surveillance may genuinely fear the consequences of any sign of opposition to the Iraqi Government both for themselves and their families in Iraq itself."

"The NUS said it was sure no registrars had complied with the request."

House and Gardner

from Charlotte K. Beyers

The new president of the University of California, Mr David P. Gardner, is to buy a new house at a cost of more than \$300,000. In addition, Mr Gardner—who will pay \$250,000 towards the house himself—will receive an unspecified annual housing allowance and "funds to pay maintenance and utilities".

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Ban lifted on Japanese professor

from Sarah Jane Evans

The Australian government has lifted a two-year ban on the entry of a prominent Japanese academic and pacifist who was accused of links with a terrorist group.

The Australian ministry for Immigration and Ethnic Affairs, has ruled Professor Rokuro Hidaka was not a security risk and would be allowed to visit Australia. The government's review of the Hidaka affair follows two years of vigorous lobbying by academics in universities in Australia and Japan.

Professor Hidaka first applied for a visa in December 1980, after Monash and La Trobe universities had invited him to visit for nine months in 1981. The then Fraser government refused to supply a visa.

It is now understood that Professor Hidaka will soon receive another invitation to teach in Melbourne. The visa ban on Mrs Hidaka will remain.

Spain to set up defence institute

from Sarah Jane Evans

MADRID

Recent developments in Madrid mark a new stage in the changing relationship between the military and civil society. The formation of close links linking the military with the universities only emphasizes the narrowness of Spain's democracy, and the short passage of time since the failed coup of February 28.

First, Madrid's Complutense University, headed by former socialist (PSOE) deputy Francisco Bustelo, and the Centre for Advanced Studies in National Defence (CESEDEN), run by Admiral Rubiales, ran a conference in closed session which agreed to close cooperation between the two institutions. They plan now to run a series of conferences in order to create at the university an "Instituto de Defensa Nacional".

One of the speakers at the conference, Professor Diaz Nicolas, noted the general lack of understanding among academics of the military. This he said, was a consequence of the military's poor reputation in university circles, and suggested that it arose from the identification of the armed forces with the previous regime. General Cano Havia, director of the army's Escuela Superior, speaking at the winding-up session, said that neither the Army nor Spain's military in general should have its own politics. "Our policy is the State's."

The second development has come from Spain's academic sociologists: the Asociación Castellana de Sociología, who set up several sessions at the university on "The Institution of the Spanish Military, in the Process of Change". This was arranged in cooperation with the Ministry of Defence, and say the organizers, was the first rigorous analysis of the armed forces.

Access appeals to Africa

from Richard Lapper

The education and culture secretary of Namibia's South West African People's Organization (SWAPO), Nahns Angula, was in London last week to extend the liberation movement's search for education aid. Two recent developments on the educational scene here are of particular interest to the Namibians and could point the way to a new direction in British development aid.

While in London, Angula, the Luand-based secretary who is spearheading SWAPO's preparations for eventual independence on the education front, held talks with government officials and aid agencies such as World University Service (WUS), over the possibility of making pre-university access courses and training courses for teachers of English as a Second Language available to SWAPO-sponsored Namibian students.

The "access" courses, which provide an alternative means of entry to higher education for adults lacking formal traditional entry requirements, are already running at a number of further education colleges in Britain. Although they were designed with Britain's own ethnic minority groups very much in mind, they could provide unique benefits for third world students whose secondary education often finishes leaving them short of British university entry levels.

Angula, believes the "access" courses could help him resolve what could become a major headache for

Reform champion to lead Afrikaner brotherhood

from Carolyn Dempster

JOHANNESBURG

The deep political divisions within South Africa's ruling white Afrikaner elite has become a major issue in academic circles, with the recent appointment of a top educationist, Professor Jan Pieter De Lange, as the new head of the powerful reform organization the Afrikaner Broederbond (brotherhood).

The change in Broederbond leadership has wide ramifications, both educationally and politically.

Professor De Lange, rector of the Rand Afrikaans University in Johannesburg, is better known as the chairman of and guiding force behind the historic document on education reform, the De Lange report. The report, which was handed to parliament in September last year after a two-year investigation of the deepening education crisis, was hailed as the most dynamic and forward-looking study on education ever produced in this country.

The professor served as chairman of the main investigating committee and was later appointed head of the working party whose function it was to collate comment on the report and submit recommendations to the government.

Politically, the professor is regarded as a *verligte* (enlightened) Afrikaner. His views closely parallel those of the ruling nationalist party minister of national education Dr Garret Viljoen and in many respects fit in with prime minister P. W. Botha's reformist policies.

He has endeavoured on every occasion to maintain a balanced objective position, and has always avoided political debate in discussing education change.

However, with his appointment as chairman of the Broederbond, a secret organization instituted to further the aims and ambitions of the Afrikaners people and their culture, his impartial position is now seriously in doubt.

Educationists who had hoped for wide-reaching education reforms in all spheres, particularly in black education, now fear that the government was not sincere in its initial approach to the education crisis. It is also felt that Afrikaner interests will continue to be promoted ahead of the interests of other population groups.

The issue is extremely perilous because the government is expected to give its first response to the De Lange report recommendations when the third session of parliament begins next month.

The split within the Broederbond, with conservative Afrikaners ranged against *verligte* Afrikaners has also had a ripple effect on Afrikaner student politics.

At the annual congress of the Afrikaners *Studentebond* (student body) only a week after the upheaval in the Broederbond, student leaders battled to maintain a facade of unity. The students are themselves politically divided in their support for the nationalist party and the breakaway conservative party, but maintain that Afrikaner unity should rise above party political differences.

As a result debate at the congress was confined to conservative cultural issues and the students refused even to openly discuss Prime Minister P. W. Botha's new constitutional proposals.

Access appeals to Africa

Access appeals to Africa

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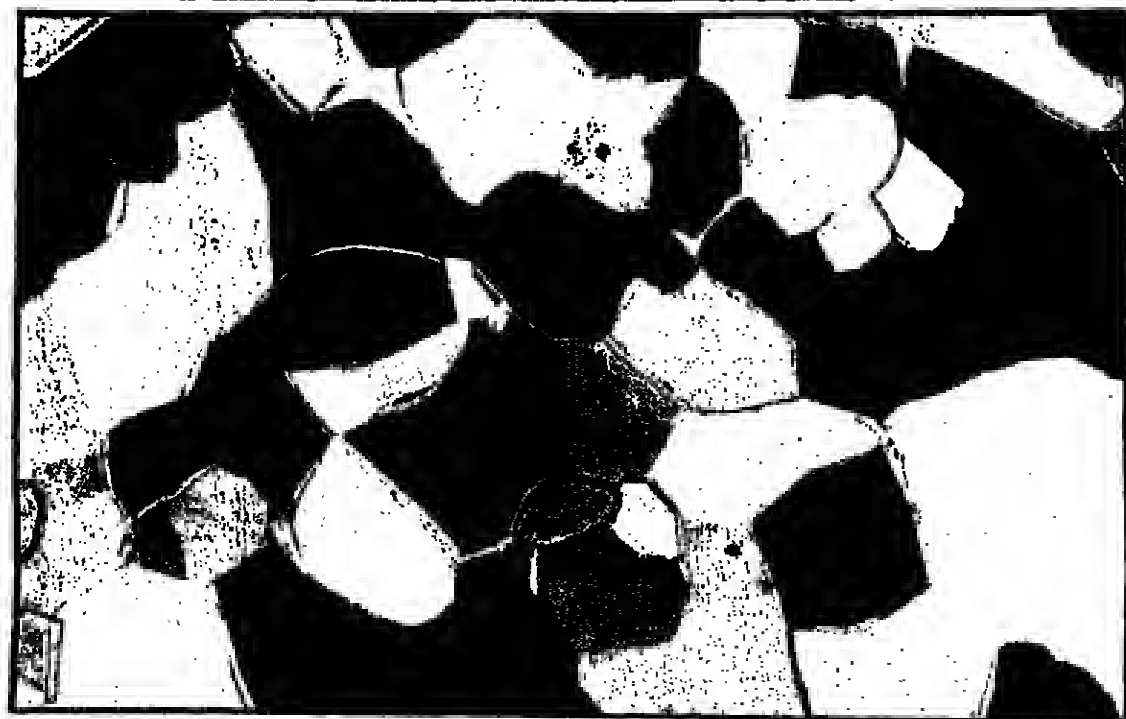
SWAPO - manpower needs in an Independent Namibia. Although SWAPO will encourage existing civil servants - the vast majority of whom are white South Africans - to stay on after independence, it fears many of them may decide to leave, leaving a new government desperately short of trained manpower.

Namibia's anachronistic colonial education system was designed to "keep the natives in their place," says Angula; only a tiny percentage of blacks finish secondary education - the number passed 100 for the first time in 1981 - and as a result scarcely any blacks can be found within the civil service.

Because so few Namibians have finished secondary education relatively few are in a position to benefit from university training and Namibia will be inevitably short of top level technicians and administrators when independence finally comes. Britain's "access" courses, combined with six-year scholarship packages, which would enable a smooth transition through to university could help resolve that.

Meanwhile Britain may also be able to help out with another urgent SWAPO need - training for teachers of English as a Second Language. SWAPO has already declared English to be a future official language.

Teaching English as a Second Language however involves skills which can be difficult to acquire and for this reason SWAPO would like to see a big increase in the numbers of Namibians being trained here.



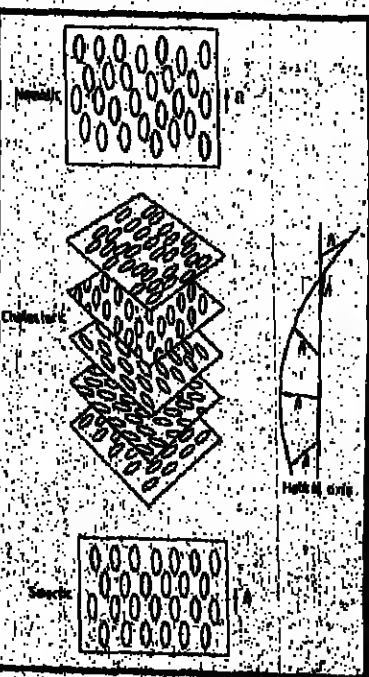
Liquid crystals, have structured layers and produce a mosaic texture when viewed using a polarizing microscope. Each domain is a single, undeformed crystal consisting of plate layers.

It hardly seems possible that a discovery by an Austrian botanist, Friedrich Reinitzer, in 1888 could have relevance to the thermometers used in the Apollo space programme, or to a complex new type of television display. Yet his observations seeded a fascinating field of scientific endeavour which has blossomed over the past decade.

Most school physics texts state solids, liquids and gases make up the three states of matter. However, almost 100 years ago, when Reinitzer prepared cholesteryl benzoate, he discovered a new phenomenon; the substance had two interesting properties. On heating, the crystals melted at 145°C to form a cloudy liquid which became clear at 179°C; on cooling, the process was reversed. Even more curious were the colour changes in the turbid liquid which seemed to be acting like a polarized electron pointer, scanning the spectrum from red to blue as the temperature increased and blue to red as the system cooled.

Since these early observations, researchers have found that during the transition from a true crystal to a true liquid, thousands of organic compounds pass through an intermediate phase which is termed liquid-crystalline. Such "liquid-crystals" exhibit some characteristics of both the solid and the liquid states, but also possess unique properties not observed in either solids or liquids. Liquid-crystals are thus considered to constitute a fourth state of matter. One distinguished researcher in this field, Professor Pierre G. de Gennes, has said: "Liquid-crystals are beautiful and mysterious; I am fond of them for both reasons."

Despite the interest shown in liquid-crystals during the 1930s by such eminent theoreticians as William H. Bragg, Louis de Broglie and Max Born, research on liquid-crystals waited over the next 20 years. The renaissance was not to come until the late 1950s and early 1960s, when an international meeting on liquid-crystals



Throwing light on a flexible type

Liquid crystals represent an intermediate or meso-phase between solid crystalline substances and "true" liquids. The molecules are not symmetrical, most are rod-shaped, and their long axis is aligned according to a preferred direction, given as θ in the diagram.

There are three basic types of liquid crystal: nematic, the least ordered phase have aligned axes while the position of the molecules is disordered; cholesteric liquid crystals have a more complex helical structure; while smectics are more completely ordered about their individual centres of gravity so that they form layers.

Since liquid crystals are fluids, a very small voltage applied to the crystal may cause a distortion which in turn leads to a change in the scattering of light. This is the principle of the liquid-crystal display now so well known from pocket calculators, watches, clocks and games.

Displaying liquid facets

George Gray explains how university chemistry has stimulated technological advance by using liquid crystals

was held in 1958, it was the first for 25 years.

The next 25 years saw a meteoric rise in the number of scientists attracted to this field because liquid-crystals were no longer regarded as chemical curiosities, but as technologically important materials. One of the early boasts was the development in 1968 by RCA Laboratories of the first practical display device based on an electro-optical property of certain liquid-crystals. However, the early displays suffered from problems of impurities and instability and only a few of the 3,000 or so liquid-crystals then made were able to operate at room temperature.

The turning point came exactly a decade ago, together with Dr K. J. Harrison and Dr J. A. Nash at the University of Hull, synthesized an extremely stable family of materials which have liquid-crystalline properties at room temperature. These materials were ideally suited to the production of low-voltage, fast-switching displays.

The breakthrough led to the chemistry department at Hull University receiving the Queen's Award for Technological Achievement in 1979, in conjunction with BCI Chemicals and the Royal Signals and Radar Establishment. The awards were given for contributions to the "research, development and large-scale production" of these liquid-crystal materials. The close collaboration between a university department, a government laboratory and an industrial company is an excellent example of how academic research in chemistry can meet real market needs and help create new technologies. This close liaison continues and covers the production of new generations of liquid-

crystal materials for the display industry.

Liquid-crystalline phases that form naturally over a specific temperature range can be classified into two main types, depending on the degree of long-range order (repulsion of atoms positions) that is retained when the solid melts. One is known as smectic, from the Greek, *smekma-atos* - soapy, a term which neatly describes their greasy or soapy properties. Liquid-crystals in the smectic phase have their rod-like molecules arranged in layers, with their long axes parallel. Liquid-crystal molecules in commercial use are usually rod-like, but some are known to occur which have large plate-like or disc shaped molecules. Others are long chain molecules known as polymers.

The other type of liquid-crystalline phase is termed nematic, from the Greek, *nema-matos* - thread, and is so called because of the thread-like pattern observed when viewed through a polarizing microscope. Here the molecules retain a parallel alignment, but are randomly positioned, not layered. Nematics are the type of liquid-crystals most used in display devices. This phase is closer than the smectic phase to the structure of true liquid in which molecules show completely random orientation.

The type of liquid-crystalline behaviour noted by Reinitzer in cholesteryl benzoate led to the use of the term "cholesteric". Strictly speaking, this is a twisted form of the nematic in that there is no layering and the molecules are randomly oriented. The direction in which the molecules are aligned however, forms a screw-like arrangement, a feature which leads to the colour change effect. The pitch of the helix can be made roughly equivalent to the wavelength of visible light and changes with temperature, hence the red/blue reversible colour change. The colour can also be changed by pressure and impurities. Not surprisingly, some organic compounds exhibit more than one liquid-crystalline phase. As the temperature is raised, order is progressively destroyed. The material passes from the solid phase through one or more smectic phases (nine are known), becomes less ordered and progresses into the nematic phase, and then eventually becomes an isotropic liquid with no long-range order.

A completely separate class of liquid-crystalline materials are known as lyotropics; these are formed by the action of a solvent on a solid. A typical system is the soap/water mixture. Lyotropic liquid-crystalline systems are of great importance in the manufacture of certain organic compounds. Research into lyotropics is helping scientists to understand the structures of biological membranes and the behaviour of cancer cells. Indeed, hardening of the arteries is a result of the deposition of liquid-crystals of cholesterol esters on artery walls. Cells involved in sickle-

cell anaemia also have liquid-crystalline structure.

The main use for liquid-crystals is in display devices. According to Dr Ian Shanks, formerly of RSRE, "more than half of the liquid-crystal displays manufactured across the world" still use the cyanobiphenyl type of liquid-crystal. Only 14 years after RCA's initial disclosure, liquid-crystal displays are ubiquitous in homes, shops, businesses and research laboratories as an essential part of digital thermometers, pocket calculators, electronic games, wristwatches and clocks.

In a typical display, a small amount of nematic liquid-crystal is placed in a thin, flat optical cell. The cell walls are coated with a transparent conducting film. On top of this is a thin film of polymer which is rubbed so as to orientate the already aligned molecules in a particular way. The application of an electric field disturbs the orientation and thus changes the optical appearance. Effecting such optical changes requires very little power, typically $\mu\text{W}/\text{cm}^2$. Modern displays are reliable, versatile and easy to read under ambient light. There are now a variety of display effects; one type uses dyes to produce coloured displays. These third generation devices have applications to portable personal computers and many other information products published during information technology year.

In these displays a single lead can carry multiplexed alpha-numeric text or limited graphics. This is a tremendous advance from the first generation displays: used in clocks and watches, which involved a simple seven-segment system, and a significant advance on the second generation devices used in pocket calculators, which employ multiplexing to drive up to four picture elements per electric line. The trend towards matrix address techniques for the display of alpha-numeric characters, graphics or pictures continues, and one asks when the next (fourth) generation of displays might appear.

In a 1975 article entitled "Whatever happened to flat-screen TV?" (New Scientist, April 10), Martin Tobias said that such liquid-crystal television sets were already available in research laboratories throughout the world. Progress in the successful commercialization of such devices has been slow, but pocket televisions are now being mass-manufactured by firms such as Casio, Hitachi, Toshiba and Matsushita. The Matsushita device consists of a 36 x 48 mm screen and contains a 240 x 240 matrix of display elements each of which has its own special transistor fabricated in a silicon wafer behind the display. Bearing in mind that liquid-crystal displays are now being used in value only to cathode ray tubes, one can see why there is much research activity in this area.

Cholesteric liquid-crystals are extremely sensitive to temperature and their striking but subtle colour changes can be used in hospitals to map the

Liquid crystals, the typical sharp image produced by liquid crystal displays on calculators, watches, clocks and games have become a part of everyday life.

surface of the skin to detect breast cancer, locate the placenta of a foetus, or diagnose pulmonary disease. They are also being used to disposable thermometers, for the non-destructive testing of electronic components, in recovery, and in chromatography for the separation of difficult materials.

Liquid-crystals are "specialty chemicals" - produced and sold to other industries because of their unique properties. They are attractive products for chemical companies to manufacture because they can be sold at higher prices than ordinary commodity chemicals. The requirement of long-term stability, however, often necessitates the manufacture of products that are more than 99.9 per cent pure. There must be rigorous quality control of the raw materials, careful separation of intermediates in the various stages of manufacture, and exacting purification of the final material. The task is important for one of the most important cyanobiphenyls (5CB) is three to four months. The world production of liquid-crystals for displays some five to seven tonnes annually, and 5CB, once the largest single item, now forms less than 10 per cent of the total. This underlines the fact that there are now a larger number of materials available; however they are competing in a larger market.

Some display devices may contain a dozen or more liquid-crystalline materials. The main reason for using mixtures is to allow "tuning" of liquid-crystal properties to meet the precise engineering requirements of the device, particularly in a working temperature range commonly -10°C to +60°C. Most of the liquid-crystal production goes to the display industry, estimated to have a world market of £150,000,000 and set to grow at 50 per cent per annum for the next five years. According to one estimate, (Frederick J. Kahn in *Physics Today*, May 1982, p. 66) some 90 per cent of today's production of twisted nematic liquid-crystal displays for calculators comes from Japan. Fortunately, it is still the Europeans who dominate the market for the supply of the liquid-crystal materials, Britain being one of the world leaders.

In the remainder of the 1980s, it seems likely that the current use of simple liquid-crystal displays in calculators, watches etc. will continue to expand into displays on many items of household equipment, for example, telephones. Displays for instrument panels in cars represent a huge potential market, already beginning to be exploited by Japanese car manufacturers. The more complex displays will be used for portable television or related systems. Developments will continue in the physics and chemistry of liquid-crystals to give better temperature ranges and response speeds, and will progress to give an improved understanding of the relationship between molecular structure and physical properties.

There can be little doubt that university research will remain a vital element in future developments. The author is Professor of Chemistry at the University of Hull, and a fellow of the Royal Society of Chemistry.

Open all hours in the best tradition

Robert Anderson defends the liberal education and open access of the old Scottish university system

Academics do not generally know much about university history, nor is there any particular reason why they should. What is considered traditional, or fundamental to the character of the university, usually reflects what was practised when the current generation started work or what they heard then from their seniors. Yet universities change as rapidly as other social institutions, and much of what they do today is of quite recent origin. The value of university history is that it can rediscover the practices of the past and make them available again as a usable tradition.

At present, this myopia is perhaps especially apparent in the idea that the prime task of a university is to educate the 18-plus group for full-time degrees, and that any other kind of activity is at best a marginal one to be fitted in when resources allow, and at worst a betrayal of academic "standards" which are assumed to be unchanging. But in nineteenth-century Scotland, the universities had a variety of functions and a different set of values, which have been overlaid and forgotten as British universities have been assimilated to a common pattern.

This was indeed the message of George Davie's book *The Democratic Intellect*, which created a stir when it first appeared in 1961 (it has recently been reissued in paperback by Edinburgh University Press), and which has continued to be widely read or at least cited, for its arguments are complex. Davie restored to historical visibility the old broad-based curriculum of the Scottish universities, which gave equal weight to classics, philosophy, and science, and whose educational ethos centred on the discussion of general ideas which was promoted by philosophy itself and by teaching other subjects in a non-specialized way.

Davie's book has hardly succeeded in reversing the shift away from broad general degrees even in Scotland, but it has attained the status of a sacred text of nationalism because of the explanation which it offers for the decline and eventual supersession of the old curriculum, an explanation in terms of Anglicization: a once lively Scottish individuality was destroyed after a long struggle between patriots who wished to retain and develop the old tradition and "Anglophiles" inspired by the southern university model. And since Davie attributes a uniquely "democratic" character to the general curriculum, the triumph of English ideas also meant the introduction of an alien pattern of social mobility.

Actually, while Davie's analysis and exposition of nineteenth-century ideas is eloquent and often brilliantly penetrating, the strictly historical aspects of his thesis are unreliable. While Anglicization was certainly a factor in nineteenth-century Scottish society, it was more a consequence than a cause of change. The move towards educational specialization can be most readily explained by looking at the social pressures which arose within Scotland as the growing middle class sought to adapt schools and universities to their changing needs, and at the practical problems engendered by any attempt to make a general "liberal" education acceptable to a large body of students whose aims are utilitarian.

The general nature of the Scottish curriculum was linked with another feature of the universities, equally important and equally fated to disappear. In 1830 a royal commission reported that the Scottish universities have always embraced Students of every variety and description... All persons may attend any of the classes, in whatever order or manner may suit their different views and prospects.

The term "continuing education" had not been invented, but it is clear that the universities' tasks went well beyond educating what the commission called "regular" students.

At both Edinburgh and Glasgow, it was said that only about a sixth of the arts students were interested in de-

grees, and at Glasgow an average of 37 took the MA each year at a time when the total number in the arts faculty was 830. The students who completed the four-year curriculum were mainly those who aimed at the Church or schoolteaching. The others included the sons of "merchants" who attended classes for a year or two before going into the family business, and a large number of part-timers who combined university attendance with work in teaching or in offices in the city. In the Scottish law faculties, this system of part-time attendance remained the norm until well into the twentieth century, but earlier it had been just as characteristic of the arts classes, and when chairs were founded in subjects like engineering, education, and political economy, which were not part of the official curriculum, the professors hardly began to gather an audience at all if they had not been able to appeal to young men already launched on their careers; lectures were given at 8am or 5pm.

In this "pedagogic supermarket", to use J. B. Morrell's apt phrase, the customers varied widely in age and background. By the 1870s the usage of entry was 16 or 17, but there were many older students - in 1870 23 per cent at Glasgow and 30 per cent at Edinburgh were 20 or more, often considerably more, when they matriculated. Thus a high proportion of students arrived with "work experience" and this was especially true of the considerable number (perhaps as many as a quarter) who were of working-class origin. The mythology of Scottish education has had much to say about the "lad of parts", the crofter's or shepherd's son who came to the university at the age of 14 from his remote parish school. He did exist, but he was a much less common phenomenon than the mature working-class sturk whose father was a skilled worker or urban tradesman. For both categories, however, the principle of open access was vital. There was no academic test on entry, and an imperfect schooling could be made up for.

As early as the 1820s the elementary nature of these Scottish arrangements was under attack and reformers were demanding that the level should be raised

The six subjects in the traditional curriculum - Latin, Greek, mathematics, logic, moral philosophy, and natural philosophy (physics) - provided both a broad liberal education for those who took them all and some attractive options for those who wished to pick and choose, paying separately for each class. Since the three "philosophies" were each taught in a single annual course, the approach was necessarily a general one.

As early as the 1820s, however, the elementary nature of the Scottish arrangements was under attack, and reformers like the evangelist John Thomas Chalmers were demanding that the level should be raised, chiefly by developing more effective secondary education so that students were older and better prepared when they arrived at the university, and by introducing the kind of competition for honours which had given new life to Oxford and Cambridge. In the 1850s this case for higher standards was taken up again and combined with the new German idea of scholarship and research. The leading reformers of that period, the classicist John Stuart Blackie and the Edinburgh lawyer James Lorimer, both of whom had studied in Germany, were among the first in Britain to expound the doctrine that the university, in Lorimer's words, "must be at once a magazine and a laboratory of thought. The notion of its being a mere teaching institution, a sort of 'Higher-School' by no



The auld tradition: Professor Blackie lecturing at Edinburgh University

means... exhausts its true idea." Professors should be devoted above all to the advancement of their subjects, and "the university must gather around it those whose most prominent function should be, not the transmission, but the pursuit of truth". Since Scottish thinking had indeed emphasized the teaching function of the universities, these new ideas met with much resistance, and they received only limited encouragement within a few years of the "junior classes". Ever since it had first been proposed in the 1820s, on entrance examination had been strenuously resisted, as likely to deter "lads of parts" and short-term or part-time students, and opponents of the change had argued clearly and consistently that the universities, as national institutions and by their very nature as universities, should be open to all without the imposition of any intellectual barrier. In 1829, Edinburgh University denounced the idea as "incongruous with the hitherto unchallenged rights of his Majesty's subjects".

In 1854, a critic of the Germanizing ideas of Lorimer claimed that universities should be "available for all grades of society - for all ages - for all intellects - for all attainments". In 1888 the Edinburgh physicist P. G. Tait declared that "any one who can pay his matriculation fees has... a right to demand enrolment in my class".

Today such views seem disconcerting, and conflict with the jargon of "standards" and "excellence". In the nineteenth century the reforming party in the academic world eventually won the day, but to traditionalists an entrance examination seemed as wrong, even morally shocking, as admitting students on anything but a strictly competitive basis seems to us. Perhaps there is no real contradiction: when university access was virtually restricted by cost and by the limited career value of a degree, free admission to all who were prepared to take their chance in the academic arena was a valid democratic ideal, but in an age when university education is coveted and when admission is accompanied by mandatory grants, a competitive selection procedure is a necessary guarantee of social justice.

The examination introduced in 1892 was a qualifying rather than a competitive one - anyone who could meet the minimum standard and pay the fees was let in. It accelerated the trend towards a more homogeneous, full-time student body, but it does not seem to have had the effect on educational opportunity which critics had feared, for working-class students remained as numerous as before. Growing prosperity and the greater availability of financial aid made it easier to stay on for the full course. But a more fundamental change was in the relationship between schools and universities. In the early nineteenth century, many observers had pointed out that the Scottish universities were really doing the job of secondary schools, giving a general education to adolescents. For reformers like Chalmers and Blackie, this was precisely what was wrong, and they looked to the development of true secondary schools to release the universities for their prop-

er, higher task.

It was only in the 1870s that this development really began, but within a few decades secondary education had made impressive progress. By 1890 the typical age of university matriculation had already risen to 17 or 18, and this was what made the entrance examination acceptable as it had not been before - the examination itself had only a marginal effect on the age pattern. The new schools were, of course, designed to meet middle-class needs, and as they came to monopolize the road to the university there was a real danger that the working class would be squeezed out; in fact this was avoided, as the provision of free schooling and scholarships, though extremely limited by modest standards, was probably an advance on the haphazard arrangements for helping the talented poor which had existed in the days of the parish schools. Finally, the growth of secondary education meant that the schools could take over some of the task of giving a "liberal" education, and the broad spread of subjects demanded by the entrance examination gave a foundation of which university specialization could legitimately be built.

Just as those who feel today that specialization has gone too far may seek inspiration in George Davie, so the openness and flexibility of the nineteenth-century universities can provide lessons (and specific precedents) at a time when part-time and continuing education, lifetime educational entitlements, and degrees by credit accumulation and transfer are increasingly dominating the agenda for the future. After all, a century of educational policies designed to promote equality and opportunity has done no more than raise the percentage of working-class students at the Scottish universities from 25 to 30; it is difficult to see how democratization can be pushed any further within the conventional framework, and if the universities are to expand their social role in the future it must be by breaking down the barriers between education, work, and daily life.

In his recent Saltire Society pamphlet *The Crisis of Scottish Education*, Nigel Grant has suggested how the universities could contribute to a national plan for "continuous and open lifelong learning". A less ambitious objective, but one still requiring a radical change in attitudes, might be to open degrees on equal terms to full-time and part-time students. What stands in the way of such innovations is partly the academic inertia, inward-looking complacency, and reluctance to take social initiatives which tend to lose the universities the sympathy of politicians of all parties, but partly also a very selective interpretation of university tradition. That is why it is useful to remind ourselves that the Scottish universities have their own traditions of civic culture and community responsiveness.

The author is lecturer in history at the University of Edinburgh. His book, *Education and Opportunity in Victorian Scotland*, is published today by OUP.

BOOKS

Solving the enigma of the world

by H. S. Reiss

The Philosophy of Schopenhauer
by Bryan Magee
Clarendon Press: Oxford University
Press, £17.50
ISBN 0 19 824673 0

Schopenhauer (1788-1860) is not much read nowadays, his philosophy, despite some recent revival of interest, recorded by Bryan Magee, is not fashionable, but neither was it during most of his life. He did not go in for self-advertisement; his stern injunction to any putative reader in the preface of his magnum opus, *The World as Will and Representation* - first to read his *Jena PhD dissertation On the Fourfold Root of the Principle of Sufficient Reason*, secondly to know Kant's philosophy well, thirdly to be familiar with Plato and, if possible, with the Upanishads, and, finally, to read his own book twice - was bound to put off any weaker brethren. Fortunately Schopenhauer proposed alternative strategies: the book could be used to fill a gap on one's library shelf, be given to a woman friend to place on her dressing-table, or it could even, as a last resort, be reviewed.

Magee's study should however not merely be reviewed but also read; for it is thorough, lucid and wide-ranging, as one might expect after the highly successful BBC series of his television interviews with leading contemporary philosophers. It is a substantial work, more comprehensive than W. Wallace's, F. C. Copleston's and D. W. Hamlyn's, and even than the Penguin volume by Patrick Gardiner, to whom it is dedicated. Magee alerts us to the main features of Schopenhauer's work and to the intellectual background. We learn how Schopenhauer sought to deal with the problems of epistemology set out by Kant. Magee makes out a good case for Kant's "transcendental idealism", refutes "transcendental realism" and shows how Schopenhauer sought to vindicate science philosophically in the wake of Locke, Berkeley, Hume and Kant.

Hardly any other writer of German philosophical prose wrote as elegantly and powerfully, lucidly and effectively as Schopenhauer. A scion of a wealthy Hanseatic family, a man of urbane and cosmopolitan outlook in part due to his having been educated not only in Germany, but also in France and England, he held the Göttingen professorial chair in contempt for its lack of urbanity and its pedantic bookish German. He heaped scorn on those who were in an arid and cloudy style.

The worst culprits were Fichte, whose Berlin lecture he had attended and whom he called a "windbag", and Hegel, from whose courses he had, when a young lecturer in Berlin, been unable to lure any students away to his own lectures and whom he dubbed a "charlatan". An admirer of English culture - he read *The Times* almost daily throughout his life - he modelled his own style on Hume, doubtless seeking to succeed where Kant, who had thought himself incapable of writing as "sublimely and attractively as Hume", had failed to succeed. And his German - and not only German - philosophers had followed his example, and emulated his urbane and crisp language, much paper and ink would have been saved and much confusion and error been avoided.

To write well is not enough: what Schopenhauer had to say is of interest too. He anticipated Freud by his emphasis on the power of the subconscious, the public's ubiquitous interest in the "public leaver", the inviolable central point of the world, his awareness of the importance of death for life and philosophy. Indeed, for him, *eros* and *thanatos*, locked in incessant strife, beset the world. Moreover, his account of evolution has a Darwinian ring, before Darwin. His central doctrine - that there is a single force underlying all phenomena which he termed "the will" and which should be called "being" - has been corroborated by modern scientific physics which has shown matter to be identical with energy. No wonder that one of the greatest physicists of the century,

Erwin Schrödinger, was, according to Magee, an out-and-out Schopenhauerian.

Schopenhauer had been deeply impressed by Kant; but the thought that Kant had missed the relationship between the phenomenal realm, the realm of sense experience, and the noumenal realm, the realm of things-in-themselves. That was, he thought, the cardinal error in Kant's thought. For Kant the noumenon was unknowable; Schopenhauer thought however that, since we know our bodies from inside we can discover that there is a force or "will" incessantly at work within us. The noumenon or thing-in-itself is thus not, as for Kant, a limiting concept, but an active force. This insight gives us a glimpse of what the noumenon is like. We can thus cross the border of the external world which we can otherwise know only within the framework of space, time and causation. This will is in fact the noumenon which, in contradistinction to the diversity of the phenomenal world, is undifferentiated.

For Magee this insight is an advance on Kant. Schopenhauer himself, with the confidence that characterizes so many philosophers, believed he had not only solved this fundamental Kantian problem for good, but also held that, as a result, "subject to the limitations of human knowledge, my philosophy is the real solution to the enigma of the world". No mean claim that! But is it true? Hardly! The confines of the phenomenal world have indeed not been crossed and the problems raised by the antinomies of reason, such as whether the world has a beginning and end in time and is limited in space, remain on the agenda, just as does the question whether a determinist or indeterminist view of life should be taken. The leap from knowledge of ourselves from within to the noumenon is metaphysical or even mystical in character, and here argument and evidence are flimsy in the extreme. As a result, Schopenhauer, despite his belief in rational argument, often appears irrational.

Although Schopenhauer, unlike Kant, believed that the world was *mere appearance*, his concern is first and foremost with the experience. Thus, his account of morality is, in the first place, descriptive. With the insight of a fine psychologist he exposes the pretensions of human action and has no difficulty in showing that moral actions are often a cloak for egotism. Yet although he demonstrates how all of us are again and again victims of unconscious drives he still continuously makes moral judgments. There is, as Magee rightly points out, no logical

reason within his system for his view that compassion is good and cruelty bad. For where all action is predetermined moral praise or censure are inappropriate. Why indeed should we seek to act morally or combat error? Why should we not, as Magee remarks, take the line of least resistance? Why indeed should Schopenhauer have combated the ruling philosophy of his day and not curried favour with the academic powers-that-be instead? By licking Hegel's boots so as to enjoy instant esteem, he might have reaped the reward of appointment to a chair of philosophy and been able to force-feed his students with oracular sayings and dogmas and to enhance the sale of his books. Instead, until the publication of an anonymous article in the *Westminster Review* (by John Oxenford) was immediately translated and published in the *Vossische Zeitung*, a leading German liberal daily, Schopenhauer remained unknown and unsung, a prophet crying in the wilderness, fortunately buttressed by a private income.

Magee's introductory sketch of Schopenhauer's life is excellent. We learn of his early travels, his knowledge of the major European languages and literatures, his interest in Oriental philosophy, his meeting with Goethe, the only man of genius he ever knew well; Goethe talked to him about his scientific work, particularly his theory of colour, and they conducted scientific experiments together. Their ways parted after Schopenhauer had published a small book on optics in which, though adopting Goethe's point of view, he also criticized the poet. But Goethe may have confirmed Schopenhauer's belief in the value of *Anschauung*, of viewing the world directly with one's eyes. From Goethe too he may have learnt that, in the arts, the universal can be grasped through the particular. This notion was at the core of his philosophy of art which occupied central place in his philosophy. For, in his view, aesthetic experience allows us to catch a glimpse of the noumenon as, for a moment the will is at rest. We are freed from its thrall and which otherwise we cannot escape. For unlike many other philosophers, Schopenhauer was not so dazzled by the rise of science, that he failed to recognize the importance of the arts, in particular of music. That is welcome, however forced his biographical division of the arts may appear.

Magee is fortunately no blind hero-worshipper. He is aware of the many inconsistencies, contradictions and errors in Schopenhauer, but his concern is all along with the main thrust of his philosophy. He argues convincingly



Arthur Schopenhauer

that his system needs to be revised in the light of twentieth-century physics. He also shows that the all-pervasive pessimism of Schopenhauer's work is not logically entailed by the structure of his system, but arises from his temporariness and from his awareness of the suffering endemic in the world of nature and thus in society. Magee also compares and contrasts Schopenhauer's work with his German contemporaries, Fichte, Schelling and Hegel, whom rather surprisingly he calls the Neo-Kantians, a name usually given to the later German philosophers, but his argument is always judicious and knowledgeable, though he is probably too kind to Fichte and even Hegel.

Today Schopenhauer is known mainly secondhand, through the work of Richard Wagner, Thomas Mann and others. Appropriately Magee has informative appendices dealing with Schopenhauer's impact on thinkers and writers, including Nietzsche, Jacob Burckhardt, Tolstoy, Hardy, Conrad, Zola and Proust (he could also have included Kafka) - it is a long list. His influence on Thomas Mann was more complex than Magee concedes, but his analysis of his profound impact on Wittgenstein and Richard Wagner is most valuable. The chapter on Wagner

is the fullest. Admittedly, the two men never met - although Wagner spent a few months in 1860 in Frankfurt where Schopenhauer had been living for the past quarter of a century or so. But Wagner did not dare call on him, quite out of character for so self-assertive a man. Probably it was just as well that courage failed him; for Schopenhauer, a brilliant conversationalist endowed with a mordant wit, would have been more than a match for the composer, especially since he did not care for Wagner's language; in a copy of the prose version of the *Ring* which Wagner had sent him in 1854 (now in the Houghton Library at Harvard University) he had written acid marginalia accusing the "dumb musician" of "not having any ears" and disapproving of his "slapping morality in the face". Schopenhauer, whether in private or public, was fearlessly outspoken, perceptive, unconventional and eloquent, nor did he put up with any nonsense, although he could be opinionated himself.

Thus, as Magee has convincingly argued, he is still well worth reading today.

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BOOKS

Striving for effects

To the Lighthouse
by Virginia Woolf
the original holograph draft
transcribed and edited by Susan Dick
Hogarth Press, £35.00
ISBN 0 7012 05415

Looking back on the composition of *To the Lighthouse*, Virginia Woolf recalled the experience as a kind of inspired pouring out of "ideas and scenes" which "blew out of (her) mind" like bubbles from a pipe. "One thing burst into another", she remembered, claiming too that she "made up" the novel "in a gush, apparently involuntary, rush".

Certainly, *To the Lighthouse* was written quickly, under the pressure of a "rapid crowd" of associations which, once expressed, freed Woolf from a painful obsession with her mother, whose likeness is caught in the portrait of Mrs Ramsay. But although the final text of the novel bears out the impression of spontaneity and freshness conveyed by Woolf's account of its genesis, it is important not to mistake speed for ease. She knew from the outset where she wanted her narrative to take her, what shape the book (and each section within it) would be given, and even which images were to be made dominant; but as Susan Dick's transcription of the original holograph draft allows us to see, the vividness of the novel, its scenic qualities and the richness of its prose were worked for - consciously and with a keen sense of how hard it is to think out a "crowd" of ideas, let alone find words to capture those ideas and share them with other people.

In the draft, words tumble forward, often without conscious being finished, as though all that mattered was getting thoughts and images on to paper before they vanished or could be pushed out by new ones. What this suggests is that Woolf's grasp of the entire shape of the novel let her accept a provisional, though not a tentative, element in her crafting of individual scenes and episodes. So herself saw this as a new departure, observing that, unlike her earlier books, *To the Lighthouse* was being written "very loosely at first; not tight at first", and that revising her manuscript would involve cutting and compressing "instead of loosening as always before".

With Susan Dick's meticulous edition of the draft - complete with all Woolf's cancellations, marginal afterthoughts and interlinear emendations - made available to us, it becomes possible to draw precise comparisons between the first version of the novel and the familiar printed text. To her useful introduction, Dick indicates many of the interesting things to look out for, including changes in the characterization of Charles Tansley (originally he was a more prominent figure, designed to emphasize the theme of social class differences); the development and intensification of central images, especially images of light and of waves; the elimination of certain details (among them, perhaps to some readers' regret, a partial recipe for *boeuf en daube*) and the addition of others, all in the interest of a balance between outward and internal drama.

Broadly speaking, the tendency of Woolf's alterations was towards a more oblique, suggestive use of language, and towards a more restrained use of point of view. Initially very descriptive, the novel as she worked on it became increasingly centred to Mrs Ramsay's thoughts and sensations, and above all her yearning for what Woolf described in her notes as a bell that would "strike and say this is it". So, for example, the paragraph which shows Mrs Ramsay pausing on her way to look into the children's bedroom, and taking a moment to herself after the chatter and exhilaration of her dinner-party, we can watch the novelist striving to create an effect of solemnity and permanence. Here, as elsewhere, revising means discarding details and self-consciously "padding" dictation; using more active verbs, and attributing the experience to the perceiving character more boldly. It is not simply a question

of finding the right words and rejecting others, but of trying to do what Woolf later said all writing was, namely the art of "putting words on the backs of rhythm" - and not letting them fall off. This is what makes the difference between the flat statement in the draft, "They would come back to this night then", and the final, beautifully cadenced version: "They would, she thought, or on again, however long they lived, come back to this night; this moon; this wind; this house; and to her too."

In this regard, as in others mentioned by Susan Dick, it is appropriate to liken Woolf, with her careful nurturing of the "germs" of ideas and her belief that rhythm "goes far deeper than words", to Henry James, another writer who planned his novels extensively before he actually started drafting them. But of course Woolf was not modelling herself on James; his example, she once remarked, could offer her "an unreal impulse" by "making it seem easy to write well; which only means that one is slipping along on horrowed skates".

The effort to "dialodge" her personal vision into rhythmic prose was all her own, and it is there to be traced throughout the holograph version of *To the Lighthouse*, in all its intensity and its fragmentariness.

Valerie Shaw

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Virginia Woolf, by Man Ray

Verbal passion

The Love Poetry of Francisco de Quevedo: an aesthetic and extraliterary study
by Julián Olivares
Cambridge University Press, £18.50
ISBN 0 521 24362 9

Francisco de Quevedo (1580-1645) is probably best known to the general reader as the author of the picaresque novel *La vida del buscón* (1626). He still enjoys among his countrymen the reputation of being a withering satirist, but the range of his writing is very wide; besides his immensely successful satirical work *Los sueños* (1627), he wrote a religious-political treatise *La política de Dios* (part 1, 1626), a bestseller in its time, some severe religious and Stoic studies, and some of the greatest poetry in the language. This includes deeply-moving religious and philosophical poems, which bear comparison with those of Donne, love poetry both intense and trivial, and a mass of ballads - comic, witty, and sometimes obscene.

This scholarly book is a study of Quevedo's "high-style" love poetry which demonstrates how the poet, dissatisfied by the limitations of the courtly love convention, rejects any purely theoretical neoplatonic solution for his passion (since this would involve the rejection of physical feeling), and moves towards the expression of that passion by intense verbal concentration and the use of the metaphysical conceit. Dr Olivares looks back, to begin with, to Dámaso Alonso's seminal and still important chapter on Quevedo in *Poesía Española* (1952), but he also reads critically the most important studies of Quevedo's love poetry in recent years. He offers some highly intelligent analyses of individual poems, usually sonnets, in his tracing of Quevedo's development, helped by skilful translations by E. L. Rivers and Bernard Benay, He makes interesting use of the Renaissance theories of courtly love and neoplatonism, particularly Hebreo, Benbo, Castiglione, and Flaminio Nobili, and of Quevedo's letters and sentences.

Quevedo follows the theorists in realizing the futility of trying to reconcile physical and spiritual, and human and divine, love. Dr Olivares shows how Quevedo's versions of the Petrarchan and courtly love convention were in fact tense and "conceited" even in apparently early poems (although this does not claim to be a chronological study), and how some of Quevedo's poems are more profound than they seem. Obviously, not all of Quevedo's poems are deeply significant, but Dr Olivares is convincing in his discussion of the poems he chooses. He examines these

Since Linnell Trilling's masterly 1939 study, *Matthew Arnold*, Arnold's consistent grappling with the problem of the relation between the local and the universal - or, say, between the individual and the communal, the subjective and the objective, between romanticism and classicism - has frequently been discussed. And, as Joseph Carroll points out, there is "something approaching a critical consensus... that Arnold is not to be regarded as a systematic thinker". Carroll does not accept the consensus and sets out to prove that Arnold's work, considered overall, advances "a complete cultural system".

Carroll parcels Arnold's career into four distinct phases. The first is a "period of discontent" represented by the early poetry (up to 1853), a poetry which evinces the morbid distress of a mind lacking a coherent *Simulacrum*. The second phase - a period of "intellectual deliverance" marked at the outset by Arnold's 1857 lecture "On the Modern Element in Literature" and running through to *Culture and Anarchy* - sees Arnold's critical formulation, in terms of the Hellenic ideal, of an intellectual and aesthetic model of completeness and objectivity. In his third phase (from 1871 to 1877) Arnold "occupies himself... with reinterpreting the Bible and traditional religion in such a way as to preserve their moral and literary content while discarding their supernatural dogmas".

Carroll applies Arnold's key historical and cultural terms to the saga's career, so that the second and third phases, respectively, are types of Hellenic expansion and Hebrew contraction: the disjunction between the two phases reflecting "in small scale", as Carroll puts it, what Arnold saw as the principle of tension between the primary forces in the history of western civilization. The main thrust of Carroll's argument is that in the fourth phase of his career ("comprising the critical essays of the last decade") Arnold moves decisively towards a theoretical resolution of the two opposing tendencies. Out of Arnold's personal and his cultural dialectic of Hebraism and Hellenism there finally emerges, it is to be supposed, something approaching a coherent synthesis.

This thesis yields the satisfactions we should expect of any neatly organized and integrated system. But while Carroll asserts the coherence and completeness of Arnold's vision, he does not demonstrate it. Arnold's fondness of tautologous phrases at times led his thinking into routine, vacant categories and to reactions. His formal classicism at times appears only as a fossilized surface riddled with the hair-line cracks of evasion, simplification, self-contradiction, and wish-fulfilment. Carroll, intent on taking everything at face value, makes no serious attempt to penetrate beneath these surfaces. The philosopher F. H. Bradley maintained in *Ethical Studies* (1876) that Arnold's definition of religion ("morality touched by emotion") could be reduced logically to the pretty meaningless statement that "it is religion when with morality you have religion". In a work which advances an idea of Arnold's "complete cultural system" we might have expected an answer to Bradley's Indictment of Arnold's reason. Moreover, in his passion for systematization, for forcing all of Arnold's creations into a scheme, Carroll can perpetrate such absurdly insensitive statements as that the poems "Dover Beach" (composed 1851) and "Stanzas from the Grande Chartreuse" (1855) "are, as it were, sterile hybrids" born of an unsuccessful attempt to provide an "intellectual resolution" to subjective anxiety, doubt, and pain.

Carroll's book is a useful and in places suggestive contribution to Arnold studies. But we remain better served by those commentators who have located Arnold's enduring significance in what they see as his deliberate and creative refusal to arrive at complete and logically consistent solutions to the question of the relation between the parts and the whole. As David Delaurie has observed in *Hebrew and Hellenic in Victorian England* (1969), Arnold remains a representative "modern" man, precisely because the "pulls and counterpulls" of his career "remain the unresolved, perhaps untidy, tensions in the humanist consciousness even a century later".

Aidan Day

Aidan Day is editor of the *Tennison Research Bulletin*.

Since Linnell Trilling's masterly 1939 study, *Matthew Arnold*, Arnold's consistent grappling with the problem of the relation between the local and the universal - or, say, between the individual and the communal, the subjective and the objective, between romanticism and classicism - has frequently been discussed. And, as Joseph Carroll points out, there is "something approaching a critical consensus... that Arnold is not to be regarded as a systematic thinker". Carroll does not accept the consensus and sets out to prove that Arnold's work, considered overall, advances "a complete cultural system".

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Soul and body

Literary Love: the role of passion in English poetry and plays of the seventeenth century
by A. J. Smith
Edward Arnold, £17.50
ISBN 0 7131 6388 7

A. J. Smith is a distinguished editor of *Donne*, and this book seeks to extend and explore some of the preoccupations which a study of that poet is likely to initiate. All the works examined here, Professor Smith tells us, "were shaped by the assumption that mind realizes itself in the body". Love is pre-eminently a matter for both body and soul, and so inevitably subject to the vicissitudes of time and place, which continually threaten and thwart its claims to partake of eternal and spiritual absolutes. This tension is explored with particular rigour and consciousness in the literature of the seventeenth century.

Each chapter, apart from a brief introduction and conclusion, is devoted to a single work - *Tristram and Isolda*, *Othello*, *Antony and Cleopatra*, Donne's love poetry, Webster's *The White Devil*, and finally *Samson Agonistes*. On the whole Smith does not make much overt reference to shared contexts, nor does he much emphasize immediate connections and comparisons between his chosen texts. None the less a number of asides of this thought are suggestive. The plotting of *The White Devil* for example is seen to have "an odd kinship with Jonson's *Alchemist*" and "Donne has more in common with Boccaccio and Machiavelli than with the idealists and transcendentalists of an opposing Tuscan tradition". An admirably wide knowledge of Renaissance European literature is thus only allowed to make brief and tantalizing appearances.

The book offers a series of close readings linked only by the texts' shared themes and attitudes and by a very definite critical stance. The critic here sets himself up to summarize, interpret and respond to the works he has chosen. A fair sample of the method is represented by this comment on the death of Cleopatra:

Our shudder of repulsion brings home to our senses this bizarre likening of the snake's fatuous malice with her enemy's, and her welcoming of that we instinctively fear. We are provoked to feel the triumph of the will which so transforms horror into a glorious summation, and makes an amorous swoon of the ebbing of consciousness itself.

The insistent rhetoric of "we" and "our" dominates this book and it comes to seem something more than just a stylistic tic. I have to admit that I felt bullied, by my "shudder of repulsion", should I experience that rather than say, fascinated sympathy, is not to be appropriated and used so easily. The rhetoric sets the scene for a peculiar collusion between writer, critic and reader that often threatens the liveliness and enterprise which criticism demands in favour of the mutual celebration of our herculean sensibilities.

This is a little unfair: Professor Smith seeks to place on the line his maturing responses to his authors' explorations and enactments of themes and stories which raise large metaphysical questions; contingency, relativism, death, immortality and so on. On occasion this strategy of offering ideal readings bears fruit. The chapter on *Tristram and Isolda* for example is particularly persuasive on the extraordinary flexibility of response that that play can demand especially in relation to the lovers themselves. There are good things said too on the curiously linked sexual identities of *Othello* and *Iago*. There is also a long and intricate analysis of Donne's "A Farewell to Love" which is enlighteningly rigorous and sober.

In the end, though, the restrictions of method restrict the interest of the philosophical, historical and human questions being asked. Too often there is summary and statement instead of inquiry and debate.

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Human politics

Politics and Human Nature
edited by Ian Forbes and Steve Smith
Frances Pinter, £14.00
ISBN 0 86187 331 9

Politics and Human Nature is a volume of 11 essays whose common conviction is that the concept of human nature is central to political discourse, and, in Steve Smith's words, that "Political argument, just as much as political activity, involves a conception of what is involved in being human".

The book grew out of a panel convened by Graeme Duncan for the 1982 conference of the Political Studies Association, where six of the papers were first presented and from the contributions were selected six of the essays deal with the conception of human nature to particular thinkers and traditions of thought. Mill and Marx, conservatism, utilitarianism, critical theory and, most broadly, political theory. Michael Nicholson contributes an intriguingly rambling and impressionistic piece on psychoanalysis and human nature, and Ruth Davies a much tighter one on varieties of feminist views while the remaining three treat the topics

of work, bureaucracy and war. Of these, Patrick and George Szusterman's essay on bureaucracy is a rather narrowly focused piece that deals primarily with Woodrow Wilson's reaction against the federalist tradition in his treatment of American administration, while John Street's discussion of work and human nature stands out from the run by reason of his willingness to consider the substantive question of what human nature is rather than what others have assumed it to be.

Human nature is an unfashionable term in social scientific circles yet, as the essays show without difficulty, some more or less consistent conception of the nature of man is necessarily assumed by every person who attempts to understand the human sphere. Some thinkers, like Mill, are explicit in their view; while others, like Marx, must have it teased out of them. The claim for the centrality of the question of "human nature" in political thought and practice contains two distinguishable elements. The first is that, at a term, "human nature" is not so vague and often lies to the stronger claim that human beings have a common nature which underlies and sets the bounds of what may be achieved in history.

The second is that what men do with their lives depends on the sort of beings they imagine themselves to be. In other words, that whether or not we know it, we model ourselves

upon one or another conception of the nature and so the potential of man. Different thinkers and traditions have tended to emphasize these aspects of the question to differing extents, sometimes using the first to minimize the importance of historical and cultural diversity in human affairs, and, as often, employing the second to deny the relevance of appeal to biological and ontological constants to political argument.

The relationship between these two aspects of the question of human nature is one of the most interesting yet least considered topics in social and political theory today. Its uncertainties reflect the paradoxical situation that in an age of scientific advance and increasing empirical knowledge, our nature is less clear to us than ever before. While its relative neglect is a consequence of the mistaken belief, prevalent in the social sciences, that appeal to "human nature" as an element in explanation can have no place in a world that has discovered the significance of evolutionary change and the role of social conditioning in the formation of the actor on the world stage.

There is also, as Graeme Duncan notes, an ideological element involved. The prevalent concept of human nature within the western tradition has almost inevitably been conservative. Political idealism, the fantasy of the model and its proper place in the literature of con-

servatism is well demonstrated by Chris Berry in his lucid restatement of the conservative view of the relationship between the nature of man and the requirements of political order and cultural tradition. The task of those who, like Duncan, both regard the concept as central and reject its habitual implications is, correspondingly, more difficult and, as the editors note, Duncan is rather better at stating his preference for an alternative, anthropological model than at justifying his choice. One cannot blame him for this. "Politics and Human Nature" is a huge and complex topic requiring the discussion of anthropological issues on which the essays of *Politics and Human Nature* do not begin to touch. Emphasis on the part which the concept of human nature plays in the thought of received traditions is useful in itself and this book is a welcome contribution to debate.

It is puzzling though that there is discussion either of classical or of Christian thought on these matters. Eivo, a venture into the foothills of political anthropology, as this collection is, must be considered incomplete without a glance at these two peaks of western thought.

David J. Levy

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BOOKS

Economic history for today

British Public Policy: an economic, social and political perspective by Sydney Checkland
Cambridge University Press, £30.00
ISBN 0 521 24596 6

If every generation needs to rewrite the history of the past, then here is history for today. As the reader puts down his newspaper and picks up Professor Checkland's book he will certainly be transported from the present into the past, but it is a past in which he is encouraged to think about the money supply, the public sector borrowing requirement, the factors that decide the level of wage settlements and such other preoccupations of our own day. The result is far from being anachronistic; on the contrary it is most illuminating.

It is perfectly sensible to ask, as Professor Checkland does, how British society dealt in the past with matters that we now recognize to be central to our own ability to survive in an orderly way. Too often such issues are ignored by historians until the moment when they become a matter of dispute and therefore begin to loom large in the historical record. Such a passive way of following what the material dictates has great shortcomings. If we wish to make sense of what happened in the past, we need to be willing to follow the example of Sherlock Holmes and to comment on the significance of the dog that did not bark, or, if you will, of the Treasury that did not react to changes in the money supply. Far from concluding that the money supply was of no importance, Professor Checkland has rightly decided to place the operation of the banking system and the legislative framework within which this was carried out in the foreground of his history of British public policy. By taking a systematic interest in the whole matter long before governments did, he is also in a good position to alert his readers to the significance of an early limited form of deliberate government policy in this sphere such as the use made of the sinking fund by nineteenth-century Chancellors.

I have concentrated on his treatment of monetary policy in order to make a more general point about the freshness of Professor Checkland's approach. This is equally apparent in his treatment of fiscal policy, of the distribution of the national income between capital and labour and of other matters that students of society ignore at their peril. This approach enables the reader to follow major themes consistently through the period as a whole. Nevertheless my historian who deals with the action of the state from the late eighteenth century to the outbreak of the Second World War is bound to find his subject matter interesting enormously in bulk and complexity towards the end of the period. The years 1914-1939 account for roughly one third of the book, yet even that is hardly long enough to do justice to the phenomenal growth of state action during those years.

The strength of the work lies in its remarkable coherence. The reader is provided with a useful summary-up at regular intervals, culminating in a wonderfully lucid presentation of the economic and social policy agenda as it had evolved by 1939. Such orderliness will make this a useful book for students. Moreover its very virtues help the reader to identify the gaps in the presentation. It is exactly because Scotland, Wales and Ireland are accorded separate treatment wherever this seems called for, that one notices to one's surprise that there is nothing on public policy in Ulster between 1922 and 1939 despite the importance of the subject and the excellent work that has been done on it. Again, whereas policy towards business and the trade unions is treated with care, one looks in vain for an exposition of the relation of the state with the professions. Perhaps the greatest weakness is due to the perfunctory attention paid to the instruments by which public policy was



This photograph shows 'The Low House' in Rhode Island, designed in the 1870s by McKim, Mead & White. It was described by the eminent architectural writer Henry-Russell Hitchcock as 'a masterpiece among American summer houses'. A book of essays dedicated to Hitchcock, *In Search of Modern Architecture*, edited by Helen Searing, is published by MIT Press at £36.00.

actually carried out. The Treasury and major departments of state could have done with the sort of care devoted to the working of the banking system.

One suspects that such sacrifices were made for reasons of space. The result is a compact book of just over four hundred pages. The sooner it goes into paperback at a price that students can afford, the better.

E. P. Hennock

E. P. Hennock is professor of modern history at the University of Liverpool.

View from the top

Government and Urban Poverty: inside the policy-making process by Joan Higgins, Nicholas Deakin, John Edwards and Malcolm Wicks
Blackwell, £15.00 and £5.95
ISBN 0 631 12937 5 and 13252 X

Urban policy in its interventionist guise began in Britain in 1968 and took on a new urgency with the Brixton and Toxteth riots of 1982. The fourteen-year period between these dates which is covered in this book is a story of extraordinary twists and turns, with each successive 'experiment' conceived in apparent ignorance of the one before. A truly radical one, the ill-fated Community Development Project, advanced the unparalleled idea that poverty might have a good deal to do with the entrenched privileges of the rich, and was promptly wound up. But some of its message was retained in the idea that urban poverty was essentially an economic problem, although as the book points out, it turned out that it flowered as Thatcherism rather than socialism.

As the sub-title suggests, this is very much a top-down view of the problem: three of the four authors report here the experience they gained as social scientists on the government payroll. It is not surprising therefore that the bureaucracy is at the centre of the analysis, and that much more attention is paid to rumblings between departments than the stirring among the poor themselves. At this level the book is very good indeed, and adds considerably to our knowledge of how the 'inner city' problem was constructed and reconstructed within the bowels of the state.

Joan Higgins traces mainly familiar ground in her chapter on the GDP, but manages to add fresh detail by concentrating on the very early period when the enthusiasm of its creator, Derek Morris, was an important factor in getting the idea accepted. John Edwards' account of the urban programme draws heavily on earlier published research, but extends that with a description of how the partnership have created a hierarchy within the 'inner city' scheme, which like a chameleon changed its colour to merge with the background. Malcolm Wicks reviews the acknowledged failure of Community Programmes, which flourished in the risks of departmental competition after Roy Jenkins as Home Secretary had decided to take the helm. The suspicion that the CDP was designed as

a swift managerial antidote to the venomous CDP is neither confirmed nor laid to rest. In the final empirical chapter Nicholas Deakin draws on his experience as head of the GLC Central Policy Unit to evaluate Peter Shore's tenure at the DoE by examining the often stormy partnership in Lambeth, and again unsurprisingly argues from the localist perspective that the heavy hand of the centre impeded the possibility of effective local initiatives.

As an insider's account of a critical period in the bureaucratic politics of urban policy, this book readily earns its place on the shelf alongside recent accounts by David Donnison and Frank Field. But its claim to provide 'a test of different theories of policy-making' must be treated with some caution. The conclusion is that the dominant influence on policy is exerted by 'administrators and administrative structures'. While this certainly meshes with the data selected for study (it would indeed be surprising if an insider view found otherwise) it fails to offer a convincing explanation of the central feature of British urban policy which the study itself identifies. When the first of these projects began in 1968 the problems of urban poverty were already well known; fourteen years and numerous initiatives later the problems were more serious than ever and exploded into violence.

It may well be that 'initiatives' come from administrators, but for the obstacles to change and the process whereby urban poverty is reinforced through the reciprocal maintenance of wealth and privilege we must look beyond this study, and indeed beyond the poor themselves.

Alan Cawson

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Legal battles

Public Legal Services: a comparative study of policy, politics and practice by Jeremy Cooper
Sweet & Maxwell, £9.50
ISBN 0 421 30350 6

A distinctive breed of communally-based lawyers, working in local law centres, often with a politically radical outlook on the legal face of social problems, has in the last decade or so become part of the landscape of British legal services.

Not that such lawyers have been content to blend unobtrusively into their surroundings, and become part of a legal establishment that has grown fat on property conveyancing. That strategy would have been totally at odds with the intended goal of getting much-needed legal services to the parts that the Law Society, notwithstanding the provisions of the Legal Aid and Advice Acts, has so signally failed to reach. And the explicit radicalism of many law centres has often generated with local authorities and a substantial part of the funding for these centres, but tend sometimes to find themselves the victim of the activities of the disaffected.

This is the first fruit of a very promising collaborative venture between the Society of Public Teachers of Law and Sweet & Maxwell to publish a series of 'high scholarly merit' for to justify publication on a 'normal commercial basis' at well below normal commercial prices.

The spectacular demise of law centres in Hillingdon and Wandsworth after the Conservatives came into power in those boroughs in the late 1970s, graphically described by Jeremy Cooper in his book, underlines the turbulent nature of the political and financial environment in which such centres operate. According to the author, Hillingdon's 'middle of the road' law centre was described by the then deputy mayor of the council as 'a festering abscess on the extreme left rump of the borough'; the centre remains closed, and one of the author's principle objects is to throw light upon the problem of balancing financial dependency (and necessary accountability) against local and professional autonomy, and the need for continuity and uniformity in the provision of an essential public service.

The book's aim is to compare the development and operation of law centres in Britain (a highly decentralized system, with both central government and the Law Society keeping a low profile), the Netherlands (highly centralized, under the auspices of that most British of institutions, a Ministry of Justice) and the United States (with an intermediate degree of centralization). The main empirical data come from a detailed study, underpinned by observation and interview, of three centres in Britain, one in Amsterdam and one in Oregon. (The author enters dutiful caveats in at least two different places about the hazards of cross-national 'transplantation' shades, perhaps, of the defensive style of academic theses, such as the one on which this book is based.)

Cooper's approach is to discover who, out of various sets of actors (central and local government, lawyers' professional bodies, the legal aid centres, the local client community, other social agencies) exercises a decisive influence upon policy. This is somewhat redolent of the 'who governs' analyses of the distribution of political power, and has resulted in a book which displays some of the strengths as well as the notorious weaknesses of that kind of work.

The book contains a lot of interesting empirical material, and some useful analysis. There are substantial chapters on training, the machinery for monitoring standards and 'political insulation' - the latter being particularly interesting. There is perhaps a hint of teleology - with the law centres 'movement' depicted rather uncritically as a battle of light against darkness. The national political dimension could usefully have been examined more fully; might it not be significant, for example, that Lord Gardiner's tenure as Lord Chancellor was a particularly important period in the development of constructive thinking about law centres, and that the Royal Commission on Legal Services was set up by a Labour rather than a Conservative government?

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Gavin Drewry

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Patriotism and protest

Landlord and Tenant in Urban Britain 1838-1918 by David Englander
Clarendon Press, Oxford University Press, £22.50
ISBN 0 19 822680 2

To suggest that rent control was a prerequisite of Allied victory in the First World War is to court the charge of military and political historicism. And yet there is force in the argument that the preservation of working-class living standards was essential to the maintenance of morale among troops as it was to the expansion of war production. Without rent control, wartime gains to wages would have been wiped out in urban areas like Coventry and Sheffield where a substantial influx of labour took place during the war. Rent control was price that had to be paid for social stability and uninterrupted production of war materiel, and, therefore, constituted a necessary condition of military success in the 1914-18 war.

How the Rent Restrictions Act of 1915 came about is, therefore, a question of some historical importance, and it is in this context that we should place the contribution of David Englander's new study of landlord-tenant strife. He has demonstrated the importance of popular agitation in the form of rent strikes as a crucial source of legislative reform. Credit for this essential part of wartime social policy must rest not with far-seeing Fabians or civil servants, but with tenants' associations, which by 1914 had had a long experience in the tactics of 'urban warfare'. Much of the early part of the book is devoted to documenting the history of these prewar struggles, the light of which the 1915 legislation appears not as a new departure but as the culmination of earlier struggles.

This study of tenant militancy clearly highlights the extent to which working-class groups sought successfully to defend their interests as consumers during the First World War. Here we can see an excellent case of the perfect compatibility of patriotism and protest, for a population prepared for mass voluntary enlistment in the British Army was not prepared to tolerate what they would try to take advantage of war conditions to line their pockets and to do so at the expense of non-workers' or soldiers' families.

This is the source of the wartime campaign against 'profiteering', a word which entered ordinary language during the war to fit what many saw as the anti-social behaviour of employers and landlords alike. But it was the simplicity of fixing rents at the August 1914 level which ensured that control over profiteering in housing was much more effective than in industry, where excess profit duties were not strictly enforced. This measure was more symbolic than substantive, but it also reflects the extent to which respect for popular sentiments about equality of sacrifice displaced a commitment to free the market take its course during the war.

We are back once more, then, with an urban version of the 'moral economy' of the English common law, but with a major difference, namely that war conditions nationalized the old tenant-landlord conflict and forced the state to act. Just as many trade unions achieved recognition as bargaining partners in industrial disputes only in wartime, so tenants' associations were able to break out of the isolation of dealing with individual landlords and to force the government to deal with the question of rent as a national problem. This is the source of Englander's claim that tenant agitation is an important and neglected part of the history of the emergence of 'social housing' in Britain. In this he is surely right; he has provided a case-penion to cement work by Aymer Oliver and David Cannadine on the politics of property-ownership among the middle class and aristocracy. Perhaps it is time for a scholar, no doubt with social democratic sympathies, to bring the classes together - at least in historical study.

The text is superbly referenced, throughout and the 638 sources quoted form an excellent bibliography. Copious use is made of explicit maps and figures but the value of some of the older black and white photographs is reduced by marked deficiencies in contrast. However,

J. M. Winter

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BOOKS

Fenland drainage

The Changing Fenland by H. C. Darby
Cambridge University Press, £17.50
ISBN 0 521 24606 7

Wetlands make up 6 per cent of the world's land area and are now considered by many to be the most threatened of all landscape types. In Britain there has been considerable recent public debate over the use of such areas typified as fen and bog, marsh and swamp. For Sedge Moor the argument between conservation and agricultural development was poignantly expressed by the much photographed burning last year of hanging effigies of the conservationists.

The story of the drainage of nine of Britain's formerly most extensive and intriguing wet lowland landscapes is lucidly documented by Professor Darby, carefully avoiding the entanglements of discussion surrounding habitat loss until the final few pages. However, the points are well made that the Fenland at the start of its draining owed its special vegetation and landscape character to economic exploitation by the local inhabitants and that examples of its original environment cannot survive without positive management.

Although some may feel that an opportunity has been missed in this updated version of *The Draining of the Fens* to expose more fully the consequences and impact of landscape and ecological change, I would not subscribe to such a view. The history that Darby has unearthed, sifted, interpreted and organized for the reader is as accurate a statement as is possible from sources of variable quality and content. It thus allows the reader to use the facts to derive his own impressions rather than have a mind made up for him at the start.

The middle five chapters which deal with drainage from the seventeenth century to 1900 are considerably rewritten and enhanced with additional material since their initial publication in 1940. In particular Darby provides much greater insight into Vermeyden's changing interpretation of Fenland drainage problems. Yet the account of lowering of the peat surface and its consequences for drainage efforts and the new details of the landscape will remain one of the most valuable sections of the text, especially for anyone who would ever doubt the ability of human endeavour to change the physical landscape.

In many ways, however, the two new chapters are the most fascinating to the student of landscape history. Chapter one examines the Fenland from Roman times to the end of the fifteenth century. A clear contrast is drawn between the inhabited silt-lands and the unoccupied undrained peatlands. The origin of villages, the nature of economic activities, the development of local wealth and its associated landscape manifestations are explained as the pattern of life and early process of land reclamation is described. We are given a most vivid picture of the early medieval landscape - an image enhanced by well selected aerial photographs which illustrate such features as former saltmarsh, medieval turbaries and former channels crossing what is now rich farmland.

A final chapter analyses the events of the present century, particularly as influenced by the Drainage Act of 1930. It traces the effects of rapidly changing drainage technology from steam power through oil to electricity but also examines the controversies surrounding flood protection and modern agricultural changes associated with the present patterns of water control.

The text is superbly referenced, throughout and the 638 sources quoted form an excellent bibliography. Copious use is made of explicit maps and figures but the value of some of the older black and white photographs is reduced by marked deficiencies in contrast. However,

the greatest illustrative tool sensitive and perceptively used by Professor Darby is that of contemporary quotation. Two examples perhaps mischievously epitomize the landscape transformation described by the author. 'Here is such a quantity of fish as to cause astonishment in strangers...' was noted by a chronicler in 1125, whereas in the nineteenth century it is stated that 'the swamp or marsh, exhaling malaria, disease and death', had been converted into 'fruitful cornfields and verdant pastures'. This most scholarly text tells us exactly how this has been achieved.

Edward Maltby

Edward Maltby is lecturer in geography at the University of Exeter.

Historical sources

Historical Change in the Physical Environment: a guide to sources and techniques by J. M. Hooke and R. J. P. Kain
Butterworth, £20.00
ISBN 0 408 10743 X

A remarkable demonstration of the practical application of historical geography in war-time is provided by J. D. Bernal's work, using seventeenth-century and eighteenth-century records to determine the physical characteristics of the beaches in Normandy where the allied forces were to make their D-day landings. Physical geographers accustomed to working in the field and in the laboratory can, in certain circumstances, advance their research by visits to record offices.

Certainly, Hooke and Kain contend that 'evidence from the past has considerable potential for providing longer-term perspectives for studies of current physical processes, for understanding the nature and causes of change and, above all, for understanding the magnitude of the impact of human activities on the physical environment'. Their main purpose is to offer guidance in the use of historical sources in analyses of the physical environment; their book is intended principally for physical geographers and other earth scientists with no formal training in the use of historical evidence.

A substantial review of graphical, literary and statistical sources relating to Britain is followed by an inevitably sketchier account of similar sources in

other countries and by a brief consideration of complementary, non-documentary, sources and of certain dating-techniques. The need to use historical sources critically and circumspectly is obvious but is rightly emphasized by Hooke and Kain in a chapter which - because of its emphasis on the limits of accuracy and of analysis - might negate the less deterrent some physical geographers find using such suspect data. These whips persist, however, will not be discouraged, for the merits of doing so are shown to outweigh the limitations in a series of case-studies dealing in turn with climatic, glacial, coastal, fluvial and vegetational changes.

From the value of historical sources to studies of morphological change, Hooke and Kain turn to the more complex problem of using such sources to examine both catastrophic physical events and long-term processes. Finally, they move into even more difficult territory, the explanation of environmental changes in recent history, concentrating on the impact of human activities (such as urbanization and land drainage) on the physical environment. The utility of what is intentionally a guidebook is enhanced by a 36-page bibliography and adequately served by brief subject and author indexes.

The ambitious scope of this pioneering book is undoubtedly laudable. Unfortunately, breadth is achieved by sacrificing depth. Each historical source assessed and each environmental problem discussed in this book requires more detailed consideration than Hooke and Kain are able to provide. They have, however, written an admirable introduction to the study of historical change in the physical environment.

The growth of subjects like historical ecology and historical climatology combined with the broad interest in recent environmental changes reflected in Hooke and Kain's book testify to the vitality of an historical approach within physical geography which has persisted despite the attempts, for example, of some systems geomorphologists to discredit it. Furthermore, such a historical perspective permits a lively dialogue between physical and human geographers, providing one means of countering some of the flippant tendencies discernible within geography today.

Alan Baker

Alan Baker is lecturer in geography at the University of Cambridge and senior tutor of Emmanuel College.

Canadian provinces

Heartland and Hinterland: a geography of Canada edited by L. D. McCaon
Prentice-Hall, £19.15
ISBN 0 13 385 146 X

This handsomely produced and well-integrated collection of articles once again tells the story of the historical and regional geography of Canada. Its unifying theme is the concept of core and periphery, here termed heartland and hinterland. The production of natural resources forms the bases of regional economies in the hinterland but most secondary manufacturing industry and financial institutions are located in the southern Ontario and Quebec heartland.

An opening chapter by the editor introduces the ensuing regional framework and includes some basic facts about and maps of the physical environment. However, these and subsequent comments by the other 14 authors on the natural environments of Canada are minimal and basic, lacking the degree of sophistication which they display to their considerations of the economic, social, political and historical processes which have fashioned Canada. A core-periphery model is just as relevant (or irrelevant) to the physical geography of Canada as to its human geography. What the Shield is to the physical scene so are the St. Lawrence lowlands to the human one.

A heartland-hinterland model is geometrically circular or at least semi-circular and seems, at first glance,

ill-fitted to the predominantly longitudinal pattern of Canada's relief and geology and the latitudinal island archipelago of settlements strung out east-west north of the United States border. However, in the hands of these authors and in the reality of the geography of Canada, it does seem to work. This is due to three major factors.

First, the St. Lawrence river enabled French settlers first to penetrate from the Atlantic and establish a core in lower Canada to be followed by the British in upper Canada - the two together becoming the heartland of the twentieth century. Second, the boundary with the United States to the south and the inhospitability of the Shield to the north thrust Canadian westwards between the two in spite of distance, difficulties of terrain and winter climate and a relatively deficient resource base. Third, all this happened because technology came to the aid of the nascent nation: railroad, river, canal and seaway, airline and pipeline, telegraph, radio and television have provided the channels of communication which have made a nation out of the nine provincial islands and, despite the fundamental dichotomy between the Quebecois and the rest.

Eric Brown

Eric Brown is professor of geography at University College London.

Later Prehistory by P. J. Fowler, a volume in Cambridge University Press's series 'The Agrarian History of England and Wales', first published in 1961, has been re-issued in paperback as *The Farming of Prehistoric Britain*, price £7.50.

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Universities

AUSTRALIA

Applications are invited for the following posts, which will be filled by 15th February 1983. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Queensland

LECTURER/SENIOR LECTURER IN CLINICAL PSYCHOLOGY

Applications are invited for a post in the Department of Clinical Psychology. The successful candidate will be responsible for teaching and supervising students in clinical psychology. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

The Flinders University of South Australia

TEMPORARY LECTURER IN ECONOMICS

Applications are invited for a temporary post in the Department of Economics. The successful candidate will be responsible for teaching and supervising students in economics. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Melbourne

LECTURER (LIMITED TENURE) IN THE LAW SCHOOL

Applications are invited for a limited tenure post in the Law School. The successful candidate will be responsible for teaching and supervising students in law. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Melbourne

LECTURER IN MODERN EUROPEAN HISTORY

Applications are invited for a post in the Department of History. The successful candidate will be responsible for teaching and supervising students in modern European history. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

James Cook University of North Queensland

TEMPORARY LECTURER IN EDUCATION IN THE SCHOOL OF EDUCATION

Applications are invited for a temporary post in the School of Education. The successful candidate will be responsible for teaching and supervising students in education. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Queensland

LECTURER - WOMEN'S STUDIES PROGRAM

Applications are invited for a post in the Women's Studies Program. The successful candidate will be responsible for teaching and supervising students in women's studies. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Murdoch University

TEMPORARY LECTURER IN PSYCHOLOGY (Ref: EN0297)

Applications are invited for a temporary post in the Department of Psychology. The successful candidate will be responsible for teaching and supervising students in psychology. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

The University of New England

LECTURER - RESOURCE ENGINEERING DEPARTMENT

Applications are invited for a post in the Resource Engineering Department. The successful candidate will be responsible for teaching and supervising students in resource engineering. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

The Australian National University

LECTURER IN MODERN EUROPEAN HISTORY

Applications are invited for a post in the Department of History. The successful candidate will be responsible for teaching and supervising students in modern European history. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Appointments

Universities
Fellowships
Research and Studentships
Polytechnics
Colleges of Higher Education
Colleges with Teacher Education
Colleges and Institutes of Technology

Technical Colleges
Colleges of Further Education
Colleges and Departments of Art Administration
Overseas Adult Education
Librarians
General Vacancies
Industry and Commerce

Other classifications

Exhibitions
Awards
Conferences and Seminars
Courses

Personal
For Sale and Wanted
Holidays and Accommodation

THE UNIVERSITY OF ASTON IN BIRMINGHAM

Computer Centre

Lectureships in Information Technology

The University Grants Committee has selected Aston as one of a number of Universities in which it will concentrate support for research in information technology. As a result, applications are invited for additional lectureships to commence as soon as possible. Appointments will be made for a fixed term of three years initially. Successful candidates will be required to undertake research and to contribute to the Centre's teaching programme. It is expected that there will be opportunity for interaction with an industry oriented Research Institute planning to include a centre of excellence in Fifth Generation technologies. Candidates should have a higher degree, preferably in Computer Science, and have special interests in one of the following areas:

- software technology
- database and information retrieval
- novel architectures or
- logic programming

Initial salary will be within and up to the maximum of the range £7,190 to £14,125 per annum.

Application forms and further particulars may be obtained from the Staff Officer (lecturing Ref: 883/1981), University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET. Tel: 021-358 3611 Ext. 4854. Closing date for the receipt of applications is 19th August 1983.

WELSH NATIONAL SCHOOL OF MEDICINE (University of Wales)

APPOINTMENT OF REGISTRAR AND SECRETARY

Applications are invited for the post of Registrar and Secretary of the Welsh National School of Medicine, an independent University Institution within the University of Wales. It is hoped that the successful applicant will take up the appointment on 1st July 1984.

Candidates should have had extensive experience of University administration and a degree or equivalent qualification; experience of the administrative processes of the National Health Service would be considered an asset. The salary will be within Grade IV of the salary scales for University administrative staff (range £17,275 per annum and upwards); the starting point will be determined according to the qualifications and experience of the successful candidate.

Applications in the form of a full curriculum vitae with the names and addresses of three referees should be received not later than 18th October, 1983 by The Provost, Welsh National School of Medicine, Heath Park, Cardiff CF4 4XN, from whom further particulars may be obtained.

University of London

British Institute in Paris

TEMPORARY LECTURERSHIP IN ENGLISH AS A FOREIGN LANGUAGE

Applications are invited for a temporary post in the British Institute in Paris. The successful candidate will be responsible for teaching and supervising students in English as a foreign language. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Universities continued

UNIVERSITY OF EAST ANGLIA

TEMPORARY LECTURERSHIP IN SEDIMENTARY GEOCHEMISTRY

Applications are invited for a temporary post in the Department of Earth Sciences. The successful candidate will be responsible for teaching and supervising students in sedimentary geochemistry. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Southampton THE UNIVERSITY

LECTURERSHIP IN MACHINE VIBRATION

The Institute of Sound and Vibration Research wishes to appoint a Lecturer in Machine Vibration. The successful candidate will be responsible for teaching and supervising students in machine vibration. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Southampton THE UNIVERSITY

School of English and Philosophy

The Department of English requires a Teaching Fellow for the period October to 30 June, 1984 to teach, preferably in the areas of 19th and 20th Century Literatures.

Salary on Range 1A £7,190-£11,615.

Further particulars may be obtained from Mrs E. C. P. Sears, Staffing Department, The University, Highfield, Southampton SO9 6NH to whom applications (in duplicate) should be sent quoting reference 2638/R by 18 August, 1983.

University of Kent

Canterbury

TEMPORARY LECTURER IN HISTORY & THEORY OF ART

Applications are invited for a temporary post in the Department of History and Theory of Art. The successful candidate will be responsible for teaching and supervising students in history and theory of art. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

The University of the South Pacific

LECTURER IN EDUCATION

Applications are invited for a post in the Department of Education. The successful candidate will be responsible for teaching and supervising students in education. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

ENGINEERING RESEARCH ASSISTANTS

Applications are invited for the posts of two RESEARCH ASSISTANTS in the Department of Mechanical Engineering. The successful candidates will be responsible for research in mechanical engineering. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Edinburgh

(Division of Scottish Business School)

LECTURERSHIP IN BUSINESS ECONOMICS MARKETING

Applications are invited for a post in the Division of Scottish Business School. The successful candidate will be responsible for teaching and supervising students in business economics and marketing. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Edinburgh

Department of Linguistics

LECTURER IN PHONETICS

Applications are invited for a post in the Department of Linguistics. The successful candidate will be responsible for teaching and supervising students in phonetics. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Surrey

LECTURER IN MECHANICAL ENGINEERING

Applications are invited for a post in the Department of Mechanical Engineering. The successful candidate will be responsible for teaching and supervising students in mechanical engineering. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Newcastle Upon Tyne

SENIOR ASSISTANT REGISTRAR

Applications are invited for a post in the Department of Health Services. The successful candidate will be responsible for administrative duties. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Hull

CHAIR OF COMPUTER STUDIES

Applications are invited for a post in the Department of Computer Studies. The successful candidate will be responsible for teaching and supervising students in computer studies. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

University of Hull

CHAIR OF COMPUTER STUDIES

Applications are invited for a post in the Department of Computer Studies. The successful candidate will be responsible for teaching and supervising students in computer studies. Details of conditions of service and application forms may be obtained from the Australian Education Office, 100 Victoria Street, London WC2E 6RF.

Universities cont

University of Reading

Department of History of Art
TEMPORARY PART-TIME LECTURER

Applicants are invited for a post of temporary part-time lecturer for part of a session 1983/84.

Candidates should have a special knowledge of French history in the last half of the 19th Century.

Salary at the rate of £1,800 p.a. based on 20 days in the session.

Applicants should send a curriculum vitae and references to the Department of History of Art, University of Reading, Whiteknights, Reading, RG2 2AA. Closing date 15 August 1983.

Examiners

Royal Society of Arts

Examinations Board
CERTIFICATE & DIPLOMA IN
DRAMA IN
EDUCATION

Applicants are invited for the post of External Examiner for the above examinations. Candidates should have experience in teaching and examining drama in education at 15-16 service level.

Applicants should send a curriculum vitae and references to the Secretary, Royal Society of Arts, 1, Bedford Square, London WC1E 6EF. Closing date 15 August 1983.

Fellowships



**FACULTY OF
MATHEMATICAL STUDIES
RESEARCH FELLOWSHIP/
ASSISTANTSHIP IN
HYDROACOUSTICS**

Applications are invited for an S.E.R.C. supported Research Fellowship/Assistantship in the Faculty of Mathematical Studies. The appointment will be for a period of two years, with a possibility of extension for a further year. Salary £12,000 p.a. (range £10,000-£14,000) plus £1,000 p.a. for research expenses. Further details and application forms are available from Mrs. D. P. Sear, The University, Highfield, Southampton SO9 5NH to whom applications, including three references should be sent by 15 August 1983. Please quote reference 1633/83.

**University of
Cambridge
King's College
JUNIOR RESEARCH
FELLOWSHIP IN
RENAISSANCE
STUDIES**

Applications are invited for a Junior Research Fellowship in Renaissance Studies. The Fellowship is for a period of three years, with a possibility of extension for a further year. Salary £12,000 p.a. (range £10,000-£14,000) plus £1,000 p.a. for research expenses. Further details and application forms are available from Mrs. D. P. Sear, The University, Highfield, Southampton SO9 5NH to whom applications, including three references should be sent by 15 August 1983. Please quote reference 1633/83.

Applicants should send a curriculum vitae and references to the Secretary, King's College, University of Cambridge, Cambridge CB2 3RQ.

**University of Exeter
Department of Psychology
RESEARCH
FELLOW**

Applications are invited from those with a degree in psychology or a related discipline for a Research Fellowship in the Department of Psychology. The Fellowship is for a period of two years, with a possibility of extension for a further year. Salary £12,000 p.a. (range £10,000-£14,000) plus £1,000 p.a. for research expenses. Further details and application forms are available from Mrs. D. P. Sear, The University, Highfield, Southampton SO9 5NH to whom applications, including three references should be sent by 15 August 1983. Please quote reference 1633/83.

oxford polytechnic

FACULTY OF EDUCATIONAL STUDIES

The Faculty wishes to make the following appointments from 1st January 1984:

4 Posts of
LECTURER/SENIOR LECTURER

In Primary Education with particular interests in:
Computers in the Curriculum (Ref ED4 (P))
Language and Reading (Ref ED5 (P))
The Humanities (Ref ED6 (P))
Social Psychology (Ref ED7 (P))

2 Posts of
LECTURER/SENIOR LECTURER

In Special Needs and in Education of the Deaf with particular interest in:
The Education of Children with Special Needs in the Ordinary School (Ref ED8 (P))
The Education of the Deaf, especially Early Language Development (Ref ED9 (P))

Salary Scale - Lecturer II/Senior Lecturer
£7,215-£13,443.

Candidates should have recent school experience as well as suitable academic qualifications. Please quote the reference when applying for any of these posts. For further details and application forms for any of the above posts please apply to Miss Margaret Egan, Oxford Polytechnic, Headington, Oxford OX3 0BP. Tel: Oxford 84777.

HUDDERSFIELD POLYTECHNIC

WELFARE COUNSELLOR

APS 28,154-28,712 Ref. NT 693A

Applications are invited for this newly created post. The person appointed will be expected to provide a Welfare Counselling Service to all members of the Polytechnic and to initiate training and support from other members of the institution who have to fulfil a pastoral or counselling role. The successful applicant should have substantial experience of working in a counselling role and should be a member of the Association of Student Counsellors or other appropriate professional body. Application forms from the Personnel Office, The Polytechnic, Queensgate, Huddersfield HD1 3DH (Tel. 0484 22285), and should be returned no later than Friday, 12 August 1983.

Bristol Polytechnic

Department of Business Studies

RESEARCH ASSISTANT IN BUSINESS

COMPUTING - REF NO R/4

Applications are invited for a Research Assistant in Business Computing. The post is for a period of two years, with a possibility of extension for a further year. Salary £12,000 p.a. (range £10,000-£14,000) plus £1,000 p.a. for research expenses. Further details and application forms are available from Mrs. D. P. Sear, The University, Highfield, Southampton SO9 5NH to whom applications, including three references should be sent by 15 August 1983. Please quote reference 1633/83.

Applicants should send a curriculum vitae and references to the Secretary, Bristol Polytechnic, Bristol BS1 1BA.

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Colleges of Technology

SURREY EDUCATION COMMITTEE

NORTH EAST SURREY
COLLEGE OF TECHNOLOGY

Reigate Road, Ewell, Epsom, Surrey KT17 3DS

Applications are invited from men and women for the following posts to be filled as soon as possible:

DEPARTMENT OF APPLIED SCIENCE

Principal Lecturer

In Information Technology

Lecturer I

In Computing

Lecturer II

In Construction Technology

Salary Scale: Principal Lecturer £12,519-£15,744 p.a.

Lecturer I £7,215-£11,888 p.a.

Lecturer II £5,649-£9,735 p.a.

Plus £246 p.a. London Fringe Allowance.

Generous relocation expenses in approved cases.

Please send a stamped addressed envelope for further particulars and application form from the Vice-Principal.

Applications should be sent to the Vice-Principal, North East Surrey College of Technology, Reigate Road, Ewell, Epsom, Surrey KT17 3DS.

Applications should be sent to the Vice-Principal, North East Surrey College of Technology, Reigate Road, Ewell, Epsom, Surrey KT17 3DS.

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Following

Executive secretary of the
University Teachers

The Week

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Bristol engineering criticized in IIMI report

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Home Office rewrites prison education handbook

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The Scottish experience

Twenty years ago in the arrogant high noon of post-war university expansion the Scottish universities with their stubbornly distinctive traditions seemed a quaint anachronism. The outward form of that distinction, the four-year honours degree, certainly appeared to be worth preserving. But the values which this form represented, a more general form of higher education available to a broader section of the population and at a younger age, seemed obsolete. The common expectation was that the Scottish universities would conform more and more closely to the English model.

Today we are not so sure that the Scottish university tradition can be dismissed so unthinkingly as a marginal anachronism. The growing elaboration of academic knowledge has led to both regret that the practice of general education has become even more attenuated than it was at the time of the Robbins report when it was already causing widespread concern and a demand that first degree courses need to be lengthened to incorporate this new knowledge. So the interest in more general courses, perhaps lasting for two years, has increased; both the National Advisory Body in its more futuristic thoughts and the recent Leverhulme Inquiry have endorsed this interest.

At the same time the maybe contradictory interest in longer degree courses has been reflected in the gradual development of, for example, four-year engineering courses. The attempts to reorganise postgraduate courses are perhaps a more distant echo of the same concern. The Scottish experience seems much more relevant than it did 20 years ago.

This new relevance is intensified by three further factors. First is the desire to widen access to higher education which is such a strong theme in the

Leverhulme final report. The puzzle remains: what is the magic formula that will burst open the gates of higher education? The second is the gloomy overture of the first. Although the present cuts are a more immediate worry, the implications of long-term demographic decline for student demand cannot be ignored. This makes it more urgent for universities to appeal to new constituencies. The third factor is an amalgam of the first two. It is the now almost conventional conviction that universities must become more involved in continuing education.

The relevance of the Scottish universities to such goals is, as Robert Anderson reminds us (p. 11), that they are the heirs to a tradition that is markedly more flexible and populist than that inherited by the English universities.

Of course, it would be naive to suggest that British higher education can solve its problems by following the example of Scotland. Again as Robert Anderson points out, the same pressures that produced the specialized honours degrees in England were also at work in Scotland. Up to the time of Robbins the English and Scottish systems were clearly on a convergent course. More and more Scottish students came to university after two years in a sixth form or equivalent and the ordinary degree was more and more swallowed up by the honours degree. The result was a shallow collection of semi-specialized courses.

Since the 1960s, however, there has been a sharp reversal of this trend especially in the west of Scotland. Edinburgh, St Andrews and Aberdeen, more arguably Dundee, Heriot-Watt and Stirling, have kept to the English pattern. But Glasgow and Strathclyde have tended to revert to a more peculiarly Scottish pattern. The age of their students at entry has

declined and general degrees have held their own. The reason may be the growing difficulty that west of Scotland secondary schools have experienced in maintaining sixth forms, especially for a second year. But the effect seems to have been to increase access to higher education in Strathclyde.

What has been happening in the west of Scotland may appear to be a reversal to Scottish tradition. But it may also be the first dim outline of a pattern of higher education that could become more general throughout Britain. The decline of the traditional sixth form, the development of tertiary colleges, and the dynamism of the Manpower Services Commission, will radically change the geography of upper secondary education. Adding a year at the beginning rather than at the end of degree courses could stimulate access, reduce the overload of knowledge, invigorate the practice of general education - and be realistic within the context of scarce resources. On the other hand lowering the normal age of entry to higher education might undermine its role as a socializing and maturing process and perhaps make it a less congenial environment for mature students so inhibiting the growth of continuing education.

For higher education to adopt the "Strathclyde" strategy wholesale would, of course, lead to cries of protest from both the schools and further education. It might be interpreted as a cynical grab for resources. Perhaps for that reason it can be dismissed as unrealistic. Yet why should the demarcation between higher and further education be fixed for ever at the age of 18? The historical example of Scotland and perhaps the present example of Strathclyde region suggest that it is possible to organize an excellent university system on the basis of a quite different relationship with the schools and further education.

firm distinction between advanced further education and non-advanced further education, at a time when there is concern to overcome the present barriers. There were many people who agreed with the philosophy of the minority report, but instead of seizing the opportunity to improve the Scottish education system, they gave it only lukewarm support, afraid that the regions would be too complicated a process compared with central control. The majority report's argument was that dramatic change was unnecessary since the present system worked well enough. If that is so, there seems nothing apart from an elitist philosophy to justify transferring successful advanced courses from the regional authority, so that now all Scottish higher education will be centrally run through either the Scottish Education Department or the University Grants Committee.

A missed opportunity

It is scarcely overdramatizing matters to say that Scotland has missed the opportunity of a lifetime. The Scottish Council for Tertiary Education has reviewed the structure and management of the tertiary sector, the Government has announced its decision on the future shape of further education and it is fair to assume it will be well into next century before a similar review is undertaken.

One reaction to the Scottish Office plans is that they leave the present system virtually unchanged, but that is overoptimistic. The Scottish Education Department has without doubt tightened its grip on both funding and control of tertiary education. It is to take over the biggest and the best of the local authority colleges while giving Lothian Region one of the smallest central institutions.

These transfers were recommended by the tertiary council's majority report, but it further recommended funding through an independent central

body. It was naive to expect any minister to give up control of spending, particularly a minister in a government trying to limit expenditure.

Until now, cash limiting advanced further education would have meant a heavy-handed approach with the regions by the Secretary of State for Scotland: now he will take over control of college management and intake.

Napier, Bell and Glasgow colleges of technology are apparently delighted by the prospect of transfer, but they would do well to remember that if they have prospered and reached national status, it has been under local authority control. They also have the recent example of Government interference with social sciences at Paisley College, not to mention the sacking of two colleges of education, to prove that central management does not increase autonomy.

But the worst effect of the Scottish Secretary's decision will be to create a

firm distinction between advanced further education and non-advanced further education, at a time when there is concern to overcome the present barriers.

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Earmarking research

When the present chairman of the Advisory Board for the Research Councils, Sir David Phillips, and the future chairman of the University Grants Committee, Sir Peter Swinerton-Dyer, both sign a report that calls for the earmarking of a research component within the university grant (page 3), then it seems fair to say that the idea has well and truly arrived.

Of course, the report of an ABRC working party on the subject given by research councils for industry and university research, contains a number of recommendations. The ABRC and the UGC should undertake the examination of the consequences of the implementation of such a policy. Such an examination is important and urgent. It is time that

the proposal to divide the UGC grant into teaching and research components was removed from the rhetorical plane and subjected to some severely practical tests. It may be a good idea but it is a workable one?

From this point of view of research earmarking seems to be the only way to shore up the crumbling dual support system. There is probably no alternative but to make dual support more explicit. The old informally simply will not work within a much larger university system and one that has come under considerable financial strain. More seriously it is clearly nonsense to suggest that research resources (funds) should be randomly allocated among the universities. From the point of view of the

universities the benefits of earmarking seem much more ambiguous: humanities scholarship and small-scale social science research might get squeezed; the links between teaching and research would be loosened; the UGC would have to become even more imperialistic and bureaucratic; and the size of the teaching component would be subject to the reduction of unit costs. More specifically very difficult problems of demarcation would arise.

So the ABRC and the UGC should go ahead with their examination so that these difficulties can be unpicked and the benefits more accurately described. At any rate the debate about earmarking for research can proceed from the first (rhetorical) to the second (practical) stage.

Laurie Taylor



Darling?

Yes, sweetie-ple.

Darling, what's this doing in the large suitcase?

What's that, my angel?

This book folded up in the lilac bath towel.

What book's that, darling?

Really, darling. There's only one book folded up in the lilac bath towel.

Ab. Thal one.

Yes indeed. *Praxis and Democratic Socialism*. No less.

'Ah... yes... that one.

Well?

Well, what?

Well, I thought we'd quite clearly agreed - quite positively and definitely agreed - that we were having a proper holiday - and that there was going to be absolutely no slipping in bits of work.

It's not actually work, darling. It's... well... you know... holiday reading.

Holiday reading! *Praxis and Democratic Socialism*?

Yes... sort of... holiday reading. In that case, I'm taking my sort of holiday reading.

Not that great big red one?

And what exactly's wrong with *The Political Economy of West African Agriculture*?

You couldn't possibly call that holiday reading.

Oh yes, I could. And what's more, it's a good half pound lighter than *Praxis and Democratic Socialism*. In fact, now I think of it, I've a good mind to pop *Ecology and Exchange in the Andes* to make up my share of the weight.

If you do that - if you do that - it's the last straw. It really is.

What will you do?

I shall jolly well go and stick my *Analysis of Fetishism in Capitalist Society* right back in the large rucksack.

Oh will you? Two can play that game. In goes *Caste, Ideology and Interaction*. Can't think why I left it out in the first place.

Right. In goes my pile of second year assessment essays.

And in goes my thirteen postgraduate dissertations.

Is that your final word?

Yes. Is it yours?

Right then. But I warn you -

What now?

I warn you... next year you can jolly well find someone else to go with you for a weekend in Paris.

The Times Higher Education Supplement

August 5, 1983 No 561 Price 50p

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Engineers call for degrees rethink

by Jon Turney

Science Correspondent

The Engineering Council this week called for a brake on the explosion of four-year engineering degree courses, and recommended that most courses be improved by increasing the third academic year in 40 weeks.

The council said in its second major policy statement there was a place for a limited number of "extended" degree courses, but these should not cater for more than 20 per cent of student engineers in universities and 10 per cent in polytechnics. These courses, which would lead to an M Eng qualification, would be for the high-flying engineers identified in the Finniston report as scarce in British industry.

In universities, the Engineering Council estimates that the existing 47 four-year courses, plus another 25 already planned, will account for 15 per cent of engineering undergraduates in universities, so the scope for further expansion is limited. The council's statement says that all other engineering students should follow "enhanced" courses, leading to a B Eng, but these should not last more than three years. Enhanced courses would include more study of design, management and business methods. They should place special emphasis on engineering ap-

plications to produce graduates who possess "a thorough knowledge of scientific principles and engineering practice, together with an appreciation of the industrial or business environment".

Extended courses would offer study of one branch of engineering in more depth, more on business methods, or a broader, multi-disciplinary programme, and all would feature extensive project work and industrial case studies. For both types of courses, the council says the recommended work should be fitted in by increasing the final year to 40 weeks if necessary.

Mr Geoffrey Hall, director of Brighton Polytechnic and chairman of the council's education and training committee, emphasized that many courses already offered all the elements of an "enhanced" curriculum, and others would often be able to qualify as enhanced without stretching terms. "There is undoubtedly extraneous matter in some degree courses - academics tend to just add things on as disciplines develop instead of redesigning part of the course", he said.

The council statement also emphasised that industrialists should be included in all course development teams, and extended courses should be started at the expense of reducing student numbers, as has happened with most existing

one-year courses. The statement recommended that selection for extended courses was deferred until after one or two years continuous assessment on an ordinary degree course, and should take account of qualities aside from academic performance.

The council's recommendations on the proportion of longer courses are broadly in line with guidance from the Department of Education and Science. Sir Keith Joseph, Secretary of State for Education, wrote to council chairman Sir Kenneth Corfield last December, calling on the council "to discourage any expectation of a general extension of the length of academic course leading to chartered professional status".

However, Professor Gordon McLellan of Leicester University, chairman of the Engineering Professors' Conference, said that while the 20 per cent target was reasonable in the short term, in the medium term he wanted to see the number of students on four-year courses increase further.

Professor Peter Thompson, dean of engineering at Trent Polytechnic and chairman of the Committee for Engineering in Polytechnics, welcomed the council's statement. But he believed that any extension of the academic year would create problems for engineering faculties in isolation, as well as requiring revision of grant regulations.

A bigger splash from the pool

Polytechnics and colleges will receive at least part of the additional money requested by the National Advisory Body to maintain access and standards in 1984/85. But the amount will fall well short of the £25m needed.

A firm response to the NAB committee's appeal will be given by Sir Keith Joseph, Secretary of State for Education and Science, in September. But the Government's spending targets for local authorities, announced this week, have left room for an increase in the Advanced Further Education Pool.

Members of the NAB committee, chaired by Mr Peter Brooke, under secretary for higher education, were told to expect some improvement in the budget proposed in this year's expenditure White Paper. No indication was given of the amount involved, although they were warned that it would not satisfy their demands.

The local authority spending announcement was not broken down by services, but the overall cuts, allowing for inflation, leave little room for "topping up" institutions' pool allocations. Some £30m was contributed to polytechnic and college budgets last year from the rates and, although legal controls will not be in force until 1985/86, tougher penalties for overspending are bound to reduce this figure substantially next year.

Many of those authorities facing the sharpest cuts, of up to 6 per cent before allowing for inflation, are those which traditionally top up polytechnics' budgets. The Inner London Education Authority, which maintains five polytechnics, and Haringey, which contributes towards Middlesex Polytechnic, are among those on or near the maximum cut.

Projections by the joint central and local government Expenditure Steering Group: Education already put the likely number of compulsory redundancies among lecturers at 1,000 on the assumption of a 5 per cent cut in real terms.

Bid to set up Islam courses

by Karen Gold

An international Muslim organization is negotiating with several English universities and local education authorities to set up postgraduate courses - and in one case a department - in Islamic studies.

The World Muslim League, whose London office has recently moved into formerly private college premises in the West End, has made approaches in London, Bradford and Manchester to universities and local authorities.

At Salford University discussions are continuing - though at an early stage - on the establishment of a new department of Islamic studies, with the WML offering to fund two posts initially to set up a taught MA in the subject.

London University's Institute of Education, after being approached about postgraduate teacher training both for religious education teachers in state schools and currently unqualified teachers in the Muslim community, has suggested that the WML fund additional places on its Postgraduate Certificate of Education course, in exchange for extra optional sections in Islam on that course.

The league's director, Dr Hashim Mahdi, met the under-secretary of state for higher education in the last government, Mr William Waldegrave, to put to him the WML's dual concern that Islam's standing in this country should be improved by bettering its academic status.

The league's interest in teacher training has been concentrated in areas with a large Muslim population. Bradford City Council received £50,000 from it this summer for improvements to the Muslim supplementary schools in the city, and is negotiating a considerably larger sum for teacher training to help implement its new policy of teaching Islam and Christianity with equal status in schools.

The Inner London Education Authority Inspectorate has also had discussions with Dr Mahdi on the possibility of the WML running an A level course in Islamic studies at its own centre for ILEA religious education teachers.



A polytechnic academic tipped to be architecture's answer to David Bellamy and Magnus Byre was launched on a television career this week. Ken Martin, head of department at Liverpool Polytechnic's school of architecture, will be seen only in the north west of England in his five-part series, *A Sense of Place*. "I want to let kids have a sense of what good architecture is about. The programme is a mixture of styles like good architecture should be."

The seven stages of adult training

A seven-point plan has been suggested by the Department of Education and Science to meet the adult training needs of industry as it looks forward to a working partnership with the Manpower Services Commission and local education authorities in this field.

In its response to the MSC's *Towards an Adult Training Strategy*, the DES pointed to the success of the courses promoted through its programme, continued on page 3

New THES columnists

Two new columnists join *The THES* this week. Dr Ernest Boyer, president of the Carnegie Corporation, and a former US Commissioner for Education in Mr Carter's administration and president of the State University of New York, will write once a month from the United States. Mr Jack Straw, Labour MP for Blackburn has replaced Mr Christopher Price as a Westminster columnist. Both these columns appear on page 22.

Nautical studies face extra cuts

by John O'Leary

and Olga Wojtas

Local authority leaders on the committee of the National Advisory Body this week overturned the advice of academics and administrators on the NAB board and made additional cuts in nautical studies.

Sir Keith Joseph, Secretary of State for Education and Science, will be asked to approve only four centres for the subject in England, rather than the five recommended by the board. Humberside College, proposed for a re-prise against the advice of the NAB secretariat, would lose its advanced courses as would Brunel Technical College, Bristol; City of London Polytechnic and the Merchant Navy College, Fleetwood; Nautical College, and Lowestoft College of Further Education.

In a similar exercise north of the border, a joint working party of the Scottish Education Department and the Convention of Scottish Local Authorities has proposed that only one college should provide advanced courses in nautical studies instead of the present four.

While the Scottish report admits that "detailed consideration" might support the retention of specialized provision in several non-nautical colleges, or a federated system of nautical education, it stresses that there is a "powerful logic" in concentrating all nautical education in one centre.

The two contenders are likely to be Glasgow and Aberdeen, since Kingsway runs only a small number of marine engineering courses, and Letham Nautical College is already under threat. The Secretary of State for Scotland intends to transfer Letham from central control to Lothian Regional Council, which hopes to run it as a further education college.

A delegation on behalf of Humberside, led by Mr Kevin McNamara, MP for Kingston-upon-Hull Central, saw Mr Peter Brooke, under secretary for higher education and chairman of the NAB committee, on Wednesday to put the college's case.

Mr John Stoddart, director of the college, said that nautical work had been rationalized already in the newly merged institution and 73 teaching jobs on 64 different courses would be at risk

If the recommendation was accepted, a sixth of the college's student intake would be lost, since non-advanced courses would be at risk, and there would be damage, too, to associated courses in fishery studies.

He described the committee's overruling of the board as an explicitly political decision taken against the advice of those "nearest the ground", recalling that there had been no opposition to Humberside's retention as a centre at the board.

However, Mr John Bevan, the NAB secretary, said there had been doubts about whether the shrinking nautical industry could support even four centres, let alone five. The committee had decided that even the colleges which would lose the remainder of their advanced nautical work would be able to retain radio courses because there were still employment opportunities in this field.

The only English college directly threatened by the cuts is Fleetwood. But the North Western regional advisory council is to consider linking the college with Liverpool Polytechnic and Riversdale College centres.

Sociologists answer their critics back

by Paul Flather

Sociologists, fed up at being penalized by cuts in university teaching and research funding and being constantly criticized for their output, are going on the offensive.

The sociology department at Surrey University has decided to issue occasional statements highlighting its achievements, which include obtaining one of the 17 social science "new blood" posts offered this year.

Professor Peter Abell, professor of sociology, said in the first statement: "We do this in the belief that much of our work has important practical implications and that the sociological study of society has a significant contribution to make to our national life."

The department has attracted five postgraduate awards from the Social Science Research Council for 1983/84, won research grants worth £75,000, created a research group investigating the Social and Personal Aspects of Information Technology (SPAIT) jointly with psychology lecturers, and been given £7,200 to run workshops in research methods.

Sociologists are reacting to criticisms of their discipline given expression last year in the Rothschild report on the Social Science Research Council. For example Dr Janet Finch, who currently chairs the British Sociological Association, pointed out that the "essential task" of sociology was to draw together strands from other social sciences.

Heads of sociology departments took up the issue of cuts with the

University Grants Committee, while the British Sociological Association produced a bulletin, *Counterpoint*, and earlier this year a free student guide to sociology opportunities.

Dr Robert Burgess BSA secretary, said criticism of the discipline had often been discussed by the executive. "We know from talking with careers officers that sociology graduates are as employable as any students. We feel that is a very good reply to any critics."

Sociologists have also responded strongly to attacks from within the profession, in recent months most notably expressed in a research report on the police by Dr P. A. J. Waddington, a lecturer at Reading University. He alleged sociologists had used dubious arguments and one-sided research to undermine the police and make them look like villains, and he accused his fellow academic researchers of aiming to bring the police into disrepute and shifting the blame from criminals.

The report, published by the right-wing Social Affairs Unit, was heavily criticized in an article in the BSA newsletter by Mr Alan Watson of Bradford University. Dr Robert Baldwin, a researcher on legal and police issues at the Oxford social-legal centre, said it was "highly selective".

"Can he conceive a whole discipline because it disagrees with a few individuals?" he asked. The controversy is continuing in the pages of the newsletter, with a rejoinder by Dr Digby Anderson, head of the unit. But it is clear sociologists are determined to hold their ground.

ARC grants to boost joint enterprise

The Agricultural Research Council is to offer new grants to encourage university researchers to act up joint projects with ARC institutes.

The scheme is one of the first responses to the Morris working party on the balance between in-house and university research among the research councils, whose report was published last week. Although it was approved by the ARC before the Morris report appeared, it was influenced by knowledge of its general recommendations.

The ARC university-linked research groups will be part of a wider effort to increase the council's support for university research.

Outside critics maintain that the ARC's expenditure in universities is currently running at about 8 per cent of its share of the science vote, is too low. The ARC's current plans entail an increase in university support to 15 per cent of its science budget allocation within five years.

The new scheme will require joint submissions from university groups and the director of the institute involved, with the first approach probably coming from the university. Projects across the whole range of the ARC's programme will be considered, and the successful proposals will lead to staff in institutes and universities working in each other's laboratories. The council has already received a dozen informal approaches from universities about the scheme, which will offer grants for between three and five-year projects to begin with.

The House of Commons Select Committee on Agriculture's report on agricultural research and development earlier this year also endorsed the University Grants Committee's view that more of the applied agricultural research commissioned by the Ministry of Agriculture through the ARC could be placed with universities.

Money for commissioned research is shared between the ARC and the ARC's day-to-day expenditure. It was decided to divert to universities the money for applied agricultural research, which is currently allocated to research departments, and food research in universities should receive a major boost by the end of 1984.



Teaching practice for Bob Adamson with "guinea pig" Italian students.

Ever willing helpers

It is 25 years since students started being sent to all corners of the world by Voluntary Service Overseas to teach or provide some skill on a voluntary basis.

In that time the competition for places on VSO schemes has become a more fierce and whereas in the early days school-leavers with little more than A levels to offer were sent out, most volunteers are now graduates, often with some relevant work experience.

This year's new recruits have been receiving their first taste of what it is like on the education training courses being run at several locations. At Kings College Hall in London, Italian students attending a summer school have been playing guinea-pigs to volunteers going out to provide English-language teaching. They included Bob Adamson, 25, a graduate from the University College of Wales Aberystwyth, who will be going to lecture in China at the Shanghai medical college.

His task will be to upgrade the English spoken by medical students and lecturers in one of China's poorer provinces. A sociology graduate from North London Polytechnic and Madeley College of Education, Hues Des Gupta Gonzalez, will be going out in September to an Indonesian university. While Keith Hargreaves, who has had four years' experience teaching English and mathematics, is going to the East Kalimantan region of Indonesia.

He will teach 12 hours a week to students of the English department at the faculty of education at the university to student teachers.

PCL gets conditional reprieve

by Karen Gold

The Polytechnic of Central London's engineering department has academic reorganization, a reduction in student enrolments and a series of external visits following the removal of three of its courses threatened with loss of validation.

The Council for National Academic Awards, which originally decided to withdraw validation from the three courses, has now agreed - with some conditions - to revalidate them by a year. The courses are BSc and BSc (Hons) in electrical and electronic engineering, and in control and computer engineering, and a part-time MSc in digital systems.

The polytechnic's court of governors this week approved the removal of responsibility for the school of science and engineering to the rectorate for a year, and the reorganization of the three courses each under a new designated director of study.

The management and organization of the courses were the areas criticized by the CNAA visiting party, which recommended that validation be withdrawn from the courses. Professor Terence Burlin to the effect of governors as the most critical of the rectorate from the CNAA had ever read.

The polytechnic has also decided to cut the intake of the BSc in electrical and electronic engineering from 30 to 25 this year, and the MSc from 50 to 45, as a way of freeing resources to meet improvements which the CNAA likely to demand.

The CNAA has not yet said PCL detailed conditions for the one-year revalidation. But the more general conditions include a recommendation for another review of organization, the department by a visiting party in the autumn, as well as a visit during following session to look at academic progress.

Most seriously for the polytechnic the CNAA appeal board has allowed revalidation has recommended a full quinquennial review of PCL "at the earliest opportunity". Professor Burlin had succeeded in postponing the quinquennial due March next year for six months because any rector appointed would have been in the job long enough to formulate policy. Now the polytechnic will be under severe pressure to come with a full-scale review even before the original date.

YTS surplus places claim is denied

by Patricia Santinelli

Manpower Services Commission claims that more places are likely to be available than needed on the Youth Training Scheme were denied by careers officers this week.

Mr David Young, chairman of the MSC, announced last week that the careers service had told them that far fewer young people than expected were coming forward, either because they had jobs or were staying on at school and college.

But Mr Ray Hurst, president of the Institute of Careers Officers said the careers service had not been asked for any formal survey. On the contrary, the current position was a shortage of vacancies in many parts of the country, and a likely delay in starts.

Mr Hurst did not see how one could claim that many more young people were staying on at school or college when the institutions themselves had no idea how many youngsters to expect and would not know until September.

The MSC's latest figures show that 98 per cent of the 460,000 year long training places have been identified and that 268,000 have been approved. More of these are for Mode A schemes - employer-based - but Mode B2 schemes - those run mainly by colleges - are only halfway to target.

Mr Young said it was unlikely that the financial penalties faced by local authorities which supported the YTS would be lifted, as ministers had not changed their minds.

The commission has not yet decided

whether 17-year-old unemployed young people who are not school leavers and are said to number 200,000 would be included on next year's scheme.

The technical and vocational education initiative (TVEI) in which 14 local authorities are currently participating would be extended from September 1984 at an extra cost of £16m a year.

The TVEI National Steering Group had been asked to draw up proposals for the extension which to cost £20m a year over five years and put these to the commission in September before Government approval is sought. There are also plans to extend the TVEI to Scotland.

Exeter College Governors have recommended that Devon County Council should finance the extra cost, around £250,000, the college is incurring through running the Youth Training Scheme.

Last month the college was told by the council to find the extra money out of its budget following a refusal by the authority to finance the scheme because of the risk of incurring Government penalties for overspending.

As a result the college faced cutting back on its traditional courses, as well as a freeze on all staff appointments in order to keep the YTS courses.

The council's further education sub-committee is to consider the recommendations at its next meeting in September. The £250,000 is basically to pay for the salaries on a full time basis of staff involved in YTS.

Unions to voice training misgivings at TUC

by David Jobbins

The rumbling undercurrent of trade union suspicion over the Youth Training Scheme is to come to the surface at the TUC in Blackpool early next month.

A wide range of trade unions have tabled motions critical of fundamental aspects of YTS - and one has called for reconsideration of the Labour movement's continued involvement in the scheme.

Official TUC policy has been to offer a guarded welcome to YTS as a step towards a coordinated education and training programme for all school leavers while encouraging affiliated unions to monitor scrupulously all proposed schemes to ensure that the abuses of the Youth Opportunities Scheme are avoided.

Now there is growing anxiety in

some quarters that a tougher stance is called for. If the National Graphical Association - this week facing suspension from the TUC because of the *Financial Times* dispute - is able to call for a reconsideration of support for the Government's training policies and effectively a campaign for a return to training within industry and retraining of the industrial training boards.

The NGA attacks the YTS for inadequate quality and failure to alleviate the "drastic plight" of the young unemployed.

Other unions, while severely critical of YTS as it is now developing, are seeking a less radical reappraisal from the TUC. The National Association of Teachers in Further and Higher Education expresses suspicion of the

Government's motives but seeks recognition for YTS as a basis for a permanent system of two-year vocational training for 16 to 19-year-olds.

Of particular concern to the National Union of Teachers, whose lengthy motion is likely to form the basis of a composite for debate at Blackpool, is the submission to area manpower boards of schemes without evidence that union approval has been sought or obtained. The union claims that the original objectives of YTS as set out in the Youth Task Group Report are not being met.

NUS believes the affiliation fee - likely to be about £1.30 for the 13-week period of off the job training - should be paid by employers out of the money they receive from the MSC.

NUS is also anxious to press the MSC to tighten up on safeguards against sex discrimination among trainees. Trainees are excluded from protection under the Sex Discrimination Act.

'Relevant' policy criticized

Careers advisors have come out strongly against debaring graduates whose degrees are not relevant to the school curriculum from entering teacher training.

In a note to the Advisory Committee for the Supply and Education of Teachers, the Association of Graduate Careers Advisory Services says that to restrict entry by specifying subject requirements can only narrow the field and produce less good teachers.

Moreover, this is the kind of restriction which might have to be lifted if the demand for teachers grows as is being anticipated, AGCAS says.

The restriction on non-relevant degree holders was first spelt out in the White Paper *Teaching Quality* and is now included in new criteria for teacher training courses being considered by the Secretary of State for Education.

This recommends that postgraduate entrants should have studied for two years at undergraduate level subjects which are related to the developing school curriculum. On this basis, degrees in psychology, anthropology, sociology, to name but a few, are not relevant for entry to teacher training.

AGCAS believes that for secondary teaching related study to degree level should usually indicate an ability to learn the necessary subject matter to be taught. While, for primary, the breadth of general education and interest of the teacher have more relevance than the degree subjects studied.

"From contact with ex-students and PGCE courses within our institutions we know that 'non-relevant' graduates perform as well as, if not better, than 'relevant' graduates on teaching practice," AGCAS says.

The association urges that as wide a range of applicants be encouraged, with institutions allowed to pick the best candidates available.

It points out too that if new restrictions are being introduced as part of Government policy, sufficient notice should be given.

"If a decision is announced in September 1983, the new requirement could be applied to those entering PGCE courses in October 1985. When new requirements for O level English and Maths were introduced, PGCE entrants were given four years' notice," AGCAS says.



Enjoying a holiday in the country - thanks to students from Swansea Volunteer Service, which is based in the Wiltshire countryside.

Medal winners

Professor John Kingman, chairman of the Science and Engineering Research Council, is one of three recipients of this year's Royal Medals awarded by the Queen on the recommendation of the Royal Society.

Professor Kingman's medal is in recognition of his mathematical research in queueing theory and genetics. The Royal Medal for work in biological science goes to Professor W. S. Feldberg of the National Institute for Medical Research for his work on nerve transmission, and the medal for applied science to Professor Dan Bradley of Trinity College, Dublin, for research on ultra-short pulsars and cameras for recording them.

The seven stages of adult training

continued from front page

ramme of professional, industrial and commercial updating (PICKUP) and singled out seven other broad areas. Steps could be taken to encourage the better assessment of individual training needs so that an appropriate choice of course provision can be taken. Financial incentives could be offered to meet the costs of continuing education rather through direct or indirect cash aid.

Assistance could be given to educational institutions so that they can investigate properly what are the adult training needs.

Financial support could be given for projects in institutions which might be

adaptable elsewhere and for promoting the adoption of successful developments.

And support could also be given for new initiatives in the PICKUP field which includes pump-priming to cover the initial heavy costs of developing courses and course materials.

Another area where assistance would be beneficial, suggested the DES, was in the promotion and dissemination of core teaching materials.

The DES also saw a need to support voluntary bodies where their work is complementary or is run in coordination with the maintained sector provision of adult training.

Rescue bid launched by SERC

by Jon Turney
Science Correspondent

The Science and Engineering Research Council has launched a rescue bid for expensive satellite tracking equipment. The council hopes someone else will foot the annual £240,000 bill for the Satellite Laser Ranges, only just installed at the Royal Greenwich Observatory, and two satellite cameras operated by Aston University.

SERC funding for the instruments, which are widely used by UK and overseas space scientists and geophysicists, was due to stop at the end of the year as a result of budget cuts. But the council's astronomy, space and radio board has now convened a panel to examine other options.

The panel will have representatives from the Ministry of Defence, Department of Industry and the Natural Environment Research Council, as well as the SERC, in the hope that one or more of them will find money to keep the instruments working.

The Earth Satellite Research Unit at Aston, which operates the two Hewlett-Packard instruments, has a staff of 15 and needs nearly £300,000 over the next three years. The unit specializes in very precise location of orbiting satellites, essential information in a range of studies of the Earth from space.

The Satellite Laser Ranges can make similar measurements extremely accurately for satellites carrying a special laser reflector. The new instrument, developed at Hull University, was recently set up at the Royal Greenwich Observatory and will cost £85,000 a year to run.

SERC funding for the two instruments will now continue at least until the astronomy board has considered the panel's conclusions, expected to be available by the end of this year.

Glasgow cleaner wins job battle

Glasgow University has been ordered to pay £2,800 compensation to a cleaner dismissed for taking a nightdress from a room she thought was vacant.

This is the culmination of a protracted battle since early spring between the university and Mrs Elizabeth Gow, who was dismissed after taking the nightdress from a room in a hall of residence. Another cleaner, who had taken a pair of shoes, coffee and tea from the same room, was given a warning.

Mrs Gow won an industrial tribunal case for wrongful dismissal, and the university was ordered to reinstate her. It appealed against this, but lost, and offered to reinstate her within the university, although not in the halls of residence. Mrs Gow refused reinstatement unless it was the same job, and has now won her appeal for compensation.

The tribunal found that the university had an "extremely haphazard" system, leaving it to the discretion of staff whether they kept items found in vacant rooms. The university is refusing to comment on the case.

New directory

Rising unemployment and the increasing use of microcomputers are both reflected in the new *Directory of Further Education* which new lists a far greater number of retraining, leisure and new technology courses. Available from CRAC Publications, Hobsons Press Ltd, 241 hzb and £35 p/b.

UGC paints a flourishing landscape picture, despite cuts

Increased private sector funding for students and more postgraduate awards are suggested in a report from the University Grants Committee on the health of landscape studies courses.

Only four universities, Edinburgh, Heriot-Watt, Newcastle and Sheffield, offer postgraduate courses which lead to professional recognition by the Landscape Institute, and faces for their future were raised within the UGC as a direct result of the cuts in university budgets.

The departments were small, expensive to run, and there was a risk that retiring staff would not be replaced. But the working party set up to examine the health of the courses had found those fears unfounded.

"All four courses are flourishing," it reported. But it identified student support as a matter of concern, noting that the number of Social Science Research Council awards slumped from 36 a year for the four courses to just 10 in 1982/83.

But it recommends that despite the SSC's financial difficulties, it should consider allocating a higher proportion of its own studentships to the subject. A further recommendation to the Landscape Institute, the professional body, is that it should explore the possibilities of private sector funding for additional student support.

It draws attention to the northern bias of the existing courses and says that any new ones should be in the south of England.

Overseas news

US grants control bid ruled out

from Janet Hook

WASHINGTON
A federal judge has invalidated education department regulations that would have cut off government student loans to Americans attending foreign medical schools that did not measure up to US academic standards.

Judge J. Green of the US district court in Washington, DC, ruled that the education department's method for measuring the quality of training provided abroad was "arbitrary and capricious." The judge prohibited the education department from enforcing the rules, which set specific academic standards for foreign medical schools.

Under the regulations, which were issued last February, Americans could receive government loans to attend a foreign medical school only if at least 50 per cent of the Americans educated at the school in the past two years had passed an examination administered by the educational commission for foreign medical school graduates. That standardized test is commonly used to evaluate the medical knowledge of foreign-trained doctors.

In the past, government student loans could be used at any foreign school if the institution was approved by professional organizations or government agencies in its home country.

American students at about 100 foreign medical schools had been receiving federal loans, but one third of those schools would have lost their certification under the new regulations.

The rules were challenged in court by La Universidad Del Este, a university in the Dominican Republic whose medical school enrols about 1,500 Americans.

Judge Greensack struck down the regulations on the grounds that the education department had no "rational basis" for setting 50 per cent as the rate at which former students had to pass the standardized medical tests. Department officials had relied on "vague and inaccurate" statistical data in choosing that rate, he said, and had failed to disclose the basis of its standard to the public — where the inaccuracies might have been detected.

In another development affecting federal student-assistance programmes, the education department has decided to give colleges additional time to come into compliance with a new law that bars young men from receiving government grants or loans if they have not registered for the military draft.

The law took effect on July 1, two days after the US supreme court lifted a lower court's order that nullified the law as unconstitutional.

Professor rehired

A white professor, dismissed from the predominantly black Howard University, is to be rehired and awarded \$125,000 plus his legal expenses, a federal court has ordered.

The court determined that Mr Antonio Planells was discriminated against when the university dismissed him and promoted less qualified black staff members.

American cost of study will increase, says report

from E. Patrick McQuaid

WASHINGTON
The American Council on Education, a non-profit-making organization representing 1,600 colleges, universities and higher education groups, is predicting that the coming academic year will cost an average of 9 to 10 per cent more on average than this year.

Students attending public colleges and universities can plan on spending an average of \$4,618 for tuition and fees while those attending independent colleges should budget \$5,939.

Various economic forecasting services are predicting that campus costs will climb 8 per cent during the autumn term, but the Congressional Budget Office predicts that the Consumer Price Index, the leading gauge of inflation, will rise around another 3 to 5 per cent during the 1983/84 academic year.

Pakistan faces chaos, says minister

from Hasan Akhtar

ISLAMABAD

Dr Mohammad Afzal, Pakistan's education minister and chairman of the University Grants Commission, has said that the country's education system failed to achieve the set national goals and was falling apart.

Dr Afzal, who was speaking to a group of 14 visiting teachers from the University of South Carolina recently, attributed the failure of the educational system in Pakistan to general apathy towards the need to improve the educational standards and levels.

Australian student numbers to rise

from Geoff Maslen

MELBOURNE

Australian higher education has received the first fruits of the Hawke government's victory in the March elections. Next year, universities and colleges of advanced education will be able to enrol 3,000 more students and, for the first time in five years, employ more staff.

Under guidelines handed down by the minister for education, Senator Susan Ryan, last week, tertiary education institutions will receive an extra \$33.1m in 1984, out of a total allocation of \$352.100m to higher education and technical and further education.

Some \$310m of the increase to universities and colleges will be directed at increasing enrolments and taking on new academics.

Radio crisis worsens

from E. Patrick McQuaid

WASHINGTON

The future of National Public Radio, the umbrella organization representing educational broadcasting in the United States, looks grim.

NPR barely made the payroll one week recently and it looked doubtful that the network would drum up \$600,000 to pay its 300 employees at the close of last week. The network suffers a \$9.1m deficit and is in arrears to a host of creditors, among them the telephone company and NPR's landlord.

NPR's board of directors, in an emergency session, has rejected a proposal from the government-funded corporation for public broadcasting that the network relinquish ownership of its programme distribution system in exchange for a bail-out loan. The government suggested transferring the title of ownership of the network's satellite equipment to a trust composed of selected public radio stations but NPR executives responded that the plan would serve to undermine the network's independence.

Members of the NPR network have pledged to contribute \$1.5m a year during the next three to aid the organization. That money, ironically, derives from individual station grants awarded by the government's corporation for public broadcasting. Educational broadcasting receives no commercial sponsorship and relies on government funding, foundation awards, and the generosity of its listeners.

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He said Pakistan spent only 6 per cent of its budget on education while even poorer countries in the region like Bangladesh and Nepal allocated 26 per cent and 8.8 per cent. Comparing the situation with India, Dr Afzal said that although in India there were many more who were starving and without shelter, they were building their future, "while we are not". Education expenditure in Pakistan was barely the equivalent of £3 per 1,000 and health expenditure was even worse.

Another factor which complicated Pakistan's economic and education system, the minister said, was the

University will aim for global, thinking

from Rebecca Irvin

LONDON

The principal of the Islamic college Mr Abdul Sattar Khan complained was not even consulted on a visit against his students. The Peshawar University, which is closed for summer vacation, has rusticated 36 students for disorderly behaviour last month which a student was killed. The students have also been directed not to visit the campus.

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Discontent grows over new Hungarian exam system

from E. Patrick McQuaid

WASHINGTON

Recent reforms in the Hungarian "Maturity" examinations, which correspond to A-levels, are causing growing discontent among would-be university entrants. The new examination requires six subjects (including Hungarian, mathematics and history) instead of the previous three. Students complain that the workload is too heavy for them to give their proper attention to all their subjects.

The new examinations were introduced as part of an effort to "democratize" university education and to eliminate the current preponderance of pupils from the country's grammar schools who go on to university (up to 70 per cent according to some authorities). There has been considerable discussion in the party theoretical press about the growth of intellectual "dynasties" in Hungary, and, at the end of the 1970s there was even talk about abolishing the grammar schools altogether. When this plan was dropped, the new examinations were officially proclaimed as making it easier for pupils from the vocational training schools to go to university.

Would-be arts students complain that the new system is loaded in favour of the sciences. An 18-year-old who wishes to offer two science subjects for his university entrance examination is able in practice to bypass the "Maturity" examination in those subjects. Hungarian examinations are graded on a five-point scale, with a passmark of three. If a university applicant (in science) gains, say, a three and a four in his university entrance examinations, these marks automatically count as a four and a five at "Maturity" level. But

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country's high birth rate. Two and a half million children are born every year while the present education system could provide schooling for only one million, forcing the rest to remain illiterate.

Pakistan's total literate population is estimated at 23 per cent but in fact only 8 per cent ever receive primary school education and only 0.37 per cent make it to colleges. Even fewer enter universities. The education minister told the American teachers that Pakistanis had a poor savings habit with the result that "we do not have enough money to run our plans".

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Recent reforms in the Hungarian "Maturity" examinations, which correspond to A-levels, are causing growing discontent among would-be university entrants. The new examination requires six subjects (including Hungarian, mathematics and history) instead of the previous three. Students complain that the workload is too heavy for them to give their proper attention to all their subjects.

The new examinations were introduced as part of an effort to "democratize" university education and to eliminate the current preponderance of pupils from the country's grammar schools who go on to university (up to 70 per cent according to some authorities). There has been considerable discussion in the party theoretical press about the growth of intellectual "dynasties" in Hungary, and, at the end of the 1970s there was even talk about abolishing the grammar schools altogether. When this plan was dropped, the new examinations were officially proclaimed as making it easier for pupils from the vocational training schools to go to university.

Would-be arts students complain that the new system is loaded in favour of the sciences. An 18-year-old who wishes to offer two science subjects for his university entrance examination is able in practice to bypass the "Maturity" examination in those subjects. Hungarian examinations are graded on a five-point scale, with a passmark of three. If a university applicant (in science) gains, say, a three and a four in his university entrance examinations, these marks automatically count as a four and a five at "Maturity" level. But

American cost of study will increase, says report

from E. Patrick McQuaid

WASHINGTON
The American Council on Education, a non-profit-making organization representing 1,600 colleges, universities and higher education groups, is predicting that the coming academic year will cost an average of 9 to 10 per cent more on average than this year.

Students attending public colleges and universities can plan on spending an average of \$4,618 for tuition and fees while those attending independent colleges should budget \$5,939.

Various economic forecasting services are predicting that campus costs will climb 8 per cent during the autumn term, but the Congressional Budget Office predicts that the Consumer Price Index, the leading gauge of inflation, will rise around another 3 to 5 per cent during the 1983/84 academic year.

country's high birth rate. Two and a half million children are born every year while the present education system could provide schooling for only one million, forcing the rest to remain illiterate.

Pakistan's total literate population is estimated at 23 per cent but in fact only 8 per cent ever receive primary school education and only 0.37 per cent make it to colleges. Even fewer enter universities. The education minister told the American teachers that Pakistanis had a poor savings habit with the result that "we do not have enough money to run our plans".

The principal of the Islamic college Mr Abdul Sattar Khan complained was not even consulted on a visit against his students. The Peshawar University, which is closed for summer vacation, has rusticated 36 students for disorderly behaviour last month which a student was killed. The students have also been directed not to visit the campus.

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Discontent grows over new Hungarian exam system

from E. Patrick McQuaid

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NOTICE BOARD

LONDON

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THES peer review

Oxbridge still dominates the quality league

The results of *The THES's* second peer review survey of the best departments may offend some people in higher education but will surprise almost no one.

In each of the four subjects chosen, chemistry, French, politics, and architecture, there was virtually no disagreement about which were the best departments in terms of research. Ranking departments in order of teaching merit caused more difficulty, but even here there was almost no cross-purposes confusion.

● In chemistry the top research departments are Cambridge, Oxford, and Imperial College universities, with Bristol and Southampton universities some way behind. The best teaching departments are identical.

● In French Oxford and Cambridge universities are again dominant in research, followed by St Andrews, Bristol University, and University College London. Oxford stays top in teaching merit, but Cambridge is pushed into fourth place by Leeds and Bradford.

● In politics a university big five dominates - Oxford, Manchester, the London School of Economics, Essex, and Strathclyde, the first three traditional centres of excellence, the last two more recent interlopers. The order of teaching merit is more messy with Exeter and Hull highly regarded.

● In architecture the research rank led by Cambridge University and the Bartlett School at University College, London, although Strathclyde and Edinburgh are also highly regarded. The teaching rank is led by the exceptional Architectural Association and second comes

Canterbury College of Art.

This is the second peer review survey carried out by *The THES*. The first published last December covered physics, history, economics and civil engineering. The intention is that this should be a regular feature covering each time a humanities, social science, natural science, and applied science or professional discipline.

This second survey provoked fewer protests than the first, perhaps because the memory of the 1981 cuts has for the moment faded. Ranking departments in order of merit is now a less ticklish business. Almost no one saw this second survey as another assault on the universities.

There were however more practical objections. In French the divisions between linguistic, language and, in the polytechnics and colleges, vocational departments

created problems. Chemistry probably needed to be sub-divided into at least physical, organic and inorganic divisions. Politics means different things in different institutions. Only with architecture, a smaller and more cohesive field, were there no serious difficulties of definition and demarcation.

There were also difficulties over the specific requirements of some of the questions. Thus, for example Scottish universities clearly were unable to supply a level score based on the Universities Central Council on Admission points system. But on the whole UCCA scores appeared to match the "teaching" rank tables, as one would expect.

Doubts were also expressed about the validity of finding out the amount of external funding earned. Even over a three year period the figures can vary considerably.

The questions we asked the heads of departments

The same questionnaire was sent to the heads of department, or equivalent, in French, politics, chemistry, and architecture in all universities and polytechnics that offer these subjects.

The questions were:

1. Which in your view are the five best departments in British higher education institutions in your subject, bearing in mind mainly the output and quality of their research?
2. Which in your view are the five best departments in your subject in British higher education institutions, bearing in mind the quality of their teaching of undergraduate students?
3. How much external funding in terms of research grants and external support did your department attract over the past three years?
4. In the last five years how many books or

articles have been published by members of staff in your department?

5. Can you please give some indication of the average Universities Central Council on Admission score of undergraduate entrants to your department? What is the highest and the lowest score in the past three years?

6. Excluding your present department, in which department would you most like to hold an academic post, in Britain and in the rest of the world?

The tables were compiled by awarding five points for a first place, four for a second, and so on. These scores were then added up to produce a ranking order. No advice was given on whether it was proper to vote for one's own institution, but some who replied clearly felt inhibited in doing so. Partly for this reason

totals of five and less are grouped at the end of the table because, in a few cases, these represent a single narcissistic vote.

Ninety-one questionnaires were sent out to French departments and 32 complete replies received, a response rate of 35 per cent. However, many institutions have linguistic rather than language departments and in the case of most polytechnics French is simply an option in a broad humanities degree. So the effective response rate from mainstream French departments is probably rather higher.

In politics 92 questionnaires were sent out and 38 replies received, a response rate of 41 per cent. In chemistry 86 questionnaires went out and 32 replies were received, a response rate of 38 per cent. In architecture the figures were 5 and 13, and the response rate was 36 per cent.

for example, received £90,000 over the last three years compared with Brunel's £400,000.

Manchester (£354,000), Lancaster (£264,788), Essex (£255,966), Strathclyde (£189,132), and York (£193,000) also attracted impressive sums in external funding.

The UCCA scores of successful candidates in politics departments tell the usual story of the attractions of geography mixed with sometimes rather garbled reputations for being good at the subject. Most universities admit students with average UCCA scores of between 9 (three Cs) and 12 (three Bs).

Durham, for instance, managed an average score of 13 with Bristol and Exeter only a little behind. But Essex with a formidable research reputation had to make do with an average score of 9. Among polytechnics the range was between 4 and 6, with Sheffield City Polytechnic at 7 perhaps showing a growing capacity to attract better students.

As for another place to work the overwhelming choice within Britain was not surprisingly Oxford, with the

LSE as a firm second choice in Manchester also favoured. Overseas Harvard was the firm favourite, but Stockholm, Berkeley, Princeton, and Padua were also favoured.

The main concern expressed by some who replied to the survey was that external funding could be a very misleading measure of research activity; very little money was needed by political theorists, while very large sums indeed were required for large-scale surveys.

Another point made was that a survey of where politics lecturers themselves had been educated would be revealing. One respondent felt that their origins would be found to be overwhelmingly to Oxford, the LSE and Manchester and that the other "research leaders" would have made much smaller contributions to the formation of the profession.

One final comment: a northern respondent himself a graduate of one of the top four politics departments felt that it now had "rather a poor department" but that it was so much "the centre of things" that its reputation was assured.

"Teaching" rank

1. Oxford
2. Manchester
3. Exeter
4. London School of Economics
5. Hull
6. Warwick
7. Reading
8. Essex
9. Lancaster
10. Cambridge
11. Newcastle
12. Leeds
13. Leicester
14. Strathclyde
15. Durham

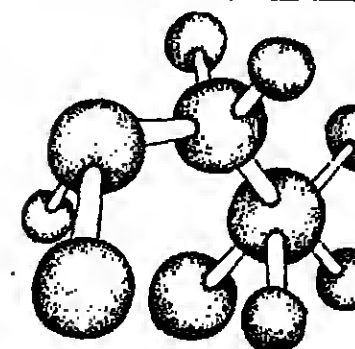
"Research" rank

1. Oxford
2. Manchester
3. London School of Economics
4. Essex
5. Strathclyde
6. Hull
7. Warwick
8. Cambridge
9. Exeter
10. Lancaster

The following institutions were also mentioned: Sussex (3), Leicester, Birmingham, Liverpool (4), Southampton, Aberdeen, York (3), Swansea, Sheffield, and Nottingham (4). Aber-

deen (1), Nottingham (1), and Sheffield (1).

THES peer review



CHEMISTRY

Cambridge and Oxford universities by universal acclaim dominate both the research and scholarship, and undergraduate teaching, tables in chemistry. They achieve almost the same scores in both tables, well ahead of any other institutions.

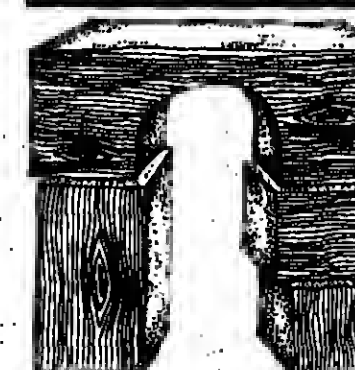
They are followed, again both in terms of research work and in terms of teaching, by Imperial College, London. Given its extensive laboratory facilities it is to be expected that it scores so well.

Bristol University is very highly regarded for its research, as is Southampton and Nottingham. The ranking is so clear that it points to fairly agreed views among the community of chemistry heads of departments. Leeds, Edinburgh and Sussex universities are also regarded highly for their research, and 18 other institutions are mentioned. Hatfield and Liverpool rate the best polytechnics.

In terms of teaching, a cluster of universities follow on the heels of the "big three" centres, including Durham, Bristol, Nottingham, Queen's University, Belfast, followed by Aberdeen, Loughborough, and Sheffield.

The UCCA scores pretty well match the apparent "teaching" rank of the institutions, with Oxford University, of those who supplied figures, recording the highest three-year average of 14 points. Then came Durham and Bristol universities with 13 each, followed by Imperial and Southampton recording almost 13, Queen's with 12, and Sheffield more than 11 on average. Among polytechnics Liverpool and North Staffordshire both averaged six points.

But the inapplicability of UCCA points to Scottish universities made a slight mockery of the answers to question 5, although one or two did supply a level UCCA score where available. Another simply pointed out the questionnaire had been drawn up by someone English.



ARCHITECTURE

With just 13 replies to the questionnaire dealing with architecture, the results must be treated with more than usual scepticism. Even so Cambridge University and the Bartlett School of Architecture at University College, London, are clearly thought to be the best centres for research and scholarship in the discipline.

"They dominate the 'research rank' table, followed by a second Scottish duo, the universities of Strathclyde and Edinburgh. Strathclyde's high standing is no surprise given that it has three established research units, with 22 full-time research fellows and assistants. Liverpool and Manchester universities are also well regarded.

In terms of undergraduate teaching, the survey produced a much wider spread with two very interesting leaders: the Architectural Association which has an international reputation and Canterbury College of Art. Next came the Bartlett School at UCL, and Sheffield University, Nottingham and

The survey brought out certain ambiguities, particularly over the length of courses involved. Scottish universities have four-year chemistry courses, and uniquely in England Oxford also has four-year courses. For that reason one respondent listed only Scottish institutions in answer to question 2. There were also legitimate worries about the different chemistry fields, particularly in the distinction between departments specialising in organic as opposed to inorganic chemistry. Polytechnics also felt their work was much more applied and not readily comparable.

Cambridge University was the clear favourite for lecturers specialising about their British department, with Oxford, not surprisingly, a close second. A group of seven other universities were mentioned: St Andrews, Bath, Bristol, Exeter, Imperial College and King's College, both in London, and Sussex. On the international level, the Massachusetts Institute of Technology was the favourite, followed by Harvard, CalTech, Berkeley and University of California in Los Angeles (UCLA), Cape Town, Prague, and Uppsala were also mentioned.

Bristol University's large department, earning £4m in external funding in the last five years from the research councils, industry, and overseas sources, particularly the US. Other large departments include Oxford

which won £3.2m, Edinburgh £1.75m, Southampton £1.69m, Imperial College £1.5m, while UWIST, Durham, Aberdeen, Exeter, Sheffield universities, and Liverpool Polytechnic all earned more than £500,000.

The large departments scored best in terms of their publications record: Bristol staff produced 12 books and 830 articles during the past five years, Southampton 17 books and 635 articles, Edinburgh 10 books and 425 articles, and Reading nine books and 419 articles. Oxford out on its own produced 33 books and 1,594 articles.

Several universities, including Bristol, Oxford, Liverpool, Newcastle, have more than one department of chemistry, for example covering inorganic, organic, physical theoretical or even analytical aspects of the discipline. The final league tables are therefore dependent on which section of the chemistry department returned as the focus of excellence.

Polytechnics also felt their work was much more applied and not really comparable. One polytechnic even sent in its 1979-81 research report to confirm the point. As one polytechnic department head said the dual support system must bias the research rank tables in favour of universities. Another pointed out that all research was industrially orientated, linked to work by local companies.

"Research" rank

1. Cambridge
2. Oxford
3. London
4. Bristol University College
5. Southampton
6. Nottingham University
7. Leeds University
8. Edinburgh
9. Aberdeen
10. Loughborough
11. Sheffield
12. Manchester University
13. Glasgow University

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"Teaching" rank

1. Cambridge
2. Oxford
3. London (Imperial College)
4. Durham University
5. Bristol University
6. Nottingham University
7. University of Wales Institute of Science and Technology, Cardiff
8. Edinburgh
9. Queen's University, Belfast
10. Aberdeen
11. Loughborough
12. Sheffield
13. Manchester University
14. Glasgow University

The following institutions were also mentioned: Leeds University (5), Liverpool Polytechnic (5), Lancaster University (4), Salford (4), Hatfield Polytechnic (3), Hull University (3), Liverpool University (3), Reading University (3), St Andrews University (2), Exeter University (2), University of East Anglia (2), Heriot-Watt (2), Huddersfield Polytechnic (2), Kingston Polytechnic (2), Southampton University (2), Waverhampton Polytechnic (2), Bath University (1), Portsmouth Polytechnic (1), Thames Polytechnic (1), Trent Polytechnic (1), Sussex University (1).

The following institutions were also mentioned: Leeds University (5), Liverpool Polytechnic (5), Lancaster University (4), Salford (4), Hatfield Polytechnic (3), Hull University (3), Liverpool University (3), Reading University (3), St Andrews University (2), Exeter University (2), University of East Anglia (2), Heriot-Watt (2), Huddersfield Polytechnic (2), Kingston Polytechnic (2), Southampton University (2), Waverhampton Polytechnic (2), Bath University (1), Portsmouth Polytechnic (1), Thames Polytechnic (1), Trent Polytechnic (1), Sussex University (1).

In terms of external funding attracted during the past three years, Strathclyde, the Institute of Advanced Architectural Studies at York University, and the school of architecture at Birmingham Polytechnic all attracted about £500,000. The Institute teaches only postgraduates, most self-financing, drawn from 15 countries.

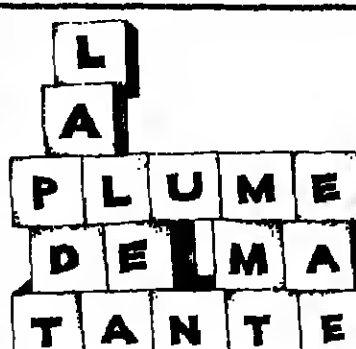
Cambridge university perhaps unsurprisingly, clearly proved the most attractive British institution where architecture dons would most like to work, with University College, London, the only other institution scoring more than just one vote. Worldwide, there was a great spread, with Harvard emerging the most popular choice, followed by the Massachusetts Institute of Technology, Princeton, and the University of California at Los Angeles.

"Research" rank

1. Cambridge
2. London - Bartlett School
3. Architecture, University College
4. Strathclyde
5. Edinburgh
6. Liverpool
7. Manchester
8. Nottingham
9. Exeter
10. Hull
11. Leicester
12. Leeds
13. North Staffordshire Polytechnic
14. Wolverhampton Polytechnic
15. Edinburgh

The following institutions were also mentioned: Kingston Polytechnic (2), University of Wales Institute of Science and Technology, Cardiff (5), Sheffield University (5), Birmingham Polytechnic (4), Oxford Polytechnic (3), Newcastle University (3), Oxford University (2), Portsmouth Polytechnic (2), Central London Polytechnic (1).

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FRENCH

Three universities - London, Oxford and Cambridge - dominate research and scholarship in French according to the collective judgment of heads of department. Within London University College is the most commonly regarded as the focus of excellence.

There is also fair agreement about which universities come next in the pecking order of research - St Andrews, Reading, Bristol, and Sussex. Also highly regarded are Warwick, Leeds, Exeter, Edinburgh, and Portsmouth Polytechnic.

However the most impressive publications record was achieved by Aston with 18 books and 113 articles published by members of the French department over the past five years. Five other university departments had ten or more books published during this period - Salford, Kent, Durham, Hull and Liverpool.

On teaching quality there was a greater spread of opinions. Oxford came top and Cambridge and Bradford university third, but Leeds was sandwiched between them clearly with a formidable reputation. Sussex, St Andrews, Cardiff, Edinburgh and Reading universities were also highly regarded.

The average UCCA scores of successful candidates tended to reflect this pecking order. Leeds and Durham

"Research" rank

1. Cambridge
2. Oxford
3. London
4. St Andrews
5. Exeter
6. Reading
7. Sussex
8. Edinburgh
9. Warwick
10. Leeds
11. Exeter
12. Manchester
13. Bradford
14. Portsmouth Polytechnic
15. Kent
16. Durham

The following institutions were also mentioned: Aston (5), Lancaster, East Anglia, Essex, Surrey and Newcastle Polytechnic (3), Salford and Bath (2), and Hull, Aberdeen, and the Polytechnic of Central London (1).

The following institutions were also mentioned: UMIST, Lancaster and Exeter (5), Birkbeck, Kent, Belfast, and the Polytechnic of Central London (4), Aberystwyth, Newcastle Polytechnic, Essex, Southampton, Kingston Polytechnic, and the Cambridge College of Arts and Technology (3); Birmingham, Aberdeen, Nottingham, and Ealing College of Higher Education (2), and East Anglia, York, and Wolverhampton Polytechnic (1).

THE TIMES SUPPLEMENTS REPRINT SERVICE

Robbins to Leverhulme

The Leverhulme programme of study into the future of higher education was organised by the Society for Research into Higher Education with grant from the Leverhulme Trust and further grants were made by the Gulbenkian Foundation and the Department of Education and Science. The programme consisted of eight seminars the first in April 1981 and the last in September 1982.

An edited four-page version of the final report is now available in reprint form (first published in *The Times Higher Education Supplement* on 27th May, 1983) price 25p.

Inquiries should be addressed to Frances Goddard, The Times Supplements, Priory House, St John's Lane, London EC1M 4BX. Cheques/postal orders should be made payable to Times Newspapers Limited (no cash).

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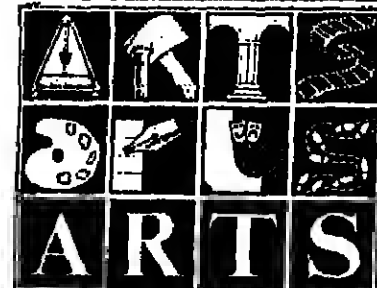
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SIR STEVEN RUNCIMAN reviews the Council of Europe exhibition on Anatolian Civilization in Istanbul; **RICHARD ALLEN CAVE** discusses Anthony Burgess's translation of *Cyrano de Bergerac* for the RSC; and **BRIAN MORTON** reviews a season of films based on American "hard-boiled" thrillers.

Panache personified

Panache is the essence of *Cyrano de Bergerac*: a mode of being as well as of expression, it is the source of his integrity and the basis of his claim to immortality.

It is a difficult quality for an English actor to convey, so given are we to the understatement of emotion: it is a flamboyance that is not mere exhibitionism, for it is rooted in a complex philosophy of life – a code of behaviour like the Renaissance concept of *sprezzatura* that demands the strenuous commitment of the whole man in his every gesture. It derives in *Cyrano* from a profoundly tragic awareness that fate has twice cursed him in giving him a monstrous nose that renders his every gesture potentially ridiculous and in placing him in an age that is vicious, misperceived, too preoccupied with status and intrigue to relish chivalry for the exacting virtue that it is. The danger for the actor is to make the panache seem a romantic, theatrical swagger when it should intimate a brilliance of mind, for *Cyrano's* insight into the folly of his age is acute, his mastery of every situation derives from a knowledge of the superiority of his imagination and sensitivity over all comers. Panache is a wild assertion of moral and intellectual difference, a triumph of the spirit against immense odds; a clear-eyed

acceptance of one's isolation and in that, as de Guiche – *Cyrano's* bitterest enemy – has finally to admit, there lies an enviable freedom: *Cyrano* places himself beyond the reach of anyone's pity, for he is never self-pitying.

Rostand devised the role of *Cyrano* for Benoit Coquelin (1841–1909) who excelled in performing the tirade, artful requiring virtuosic powers of declamation. It is through words as well as deeds that *Cyrano* creates and sustains his conception of an ideal self: "Moi, c'est moi-même que j'ai mes élans," he claims and Rostand made his verbal artistry symbolise of this and of an abundant zest for life. Words spill from him in a rich exuberance of feeling. It is here that the English actor relies most heavily on a translator: the subtlety that is panache can easily be flattened into bravado or mawkishness. Too literal a translation can kill the wit – especially the accolade achieved in the French by the succinctness and sense of climax possible with rhyming Alexandrines. Anthony Burgess's version for the Royal Shakespeare Company can match the epigrammatic style adroitly ("Our devil changed into a Christian brother! / Attack one nostril and he turns the other") and he exploits one's expectations of rhyme with comic brio in the scene where Christian proves his courage by inter-

rupting *Cyrano's* account of the battle at the Porte de Neale, turning the epic narrative into a farce with references to the prodigious size of the hero's nose. Every couplet seems to invite yet another synonym for that unfortunate member.

In more intimate moments when *Cyrano's* indignation takes wing, Burgess expands into apt metaphor where the original explores the niceties of grammar. When *Cyrano* woos Roxane on Christian's behalf, his ardour brings him to a pitch of sensitivity in which he can gauge Roxane's every delicate fluctuation of feeling, although she towers above him on her balcony. In an earlier translation Christopher Fry translated this with prosaic literalness: "I can feel the gentle trembling of your hand / Shaking the jasmine branches where I stand!" Burgess goes for the spirit of the French and makes it a moment of complete imaginative identification with the beloved – tender, devoted, a perfect consummation: "... and the passion of that trembling weaves / A spider-filament that seeks me now / Feeling its way along the jasmine bough." What Fry renders as a physical fact, Burgess by an airy fantasy transforms into an experience of spiritual union that touches rapture, wonder and emotional scruple. In his truth to



Derek Jacobi as Cyrano and John Bawa as Le Bret in the RSC production at the Barbican Theatre. Picture by Nobby Clark.

the complex psychology of Rostand's creation, Burgess's version is unerring in exact.

So too is Jacob's rendering of *Cyrano*: his voice is effortlessly expansive and musical throughout its immense range; wit sparkles through his timing and inflections; the tonal transitions are dazzling, the moments of pathos perfectly judged. He bestrides the seething world of seventeenth-century France that Terry Hands's production evokes, a pillar of commitment and fiery sincerity amid the affectation and duplicity. Pancho for Jacob is not an excuse for theatrical

mannerism; his integrity like *Cyrano's* is absolute: he gives his virtuosity the role of the role rather than the role of the actor. Always a fine actor, his perfect *Cyrano* proves him a great one, daring matched with a melodic scruple.

Jacob's *Cyrano* is the perfect embodiment of panache.

Richard Allen Cave

Richard Allen Cave is lecturer in English at Bedford College, London.

The hard-boiled film

It's a media cliché that bad novels make good films. Sadly the reverse often holds as well. Hollywood has displayed an irritating tendency to abstract the most banal and trivial themes from great novels; Joan Didion describes movie moguls on the set of *The Great Gatsby* admiring ignorance of "the basic material" and quoting from a sketchy four-page "treatment" which made a nonsense of Fitzgerald's text.

To coincide with a recent season of Hollywood adaptations at the National Film Theatre, Zomba Books have released three omnibus volumes of thrillers by Cornell Woolrich, Jim Thompson and David Goodis, who along with James M. Cain (also featured at NFF), are the ten-minute eggs of the hard-boiled school beloved of film-makers.

Adaptation is always a complex business and with film the story of critical attention in the 1960s and 70s only muddled the pool. Typically French concerns – identity, violence, community; the apparatus of existentialism – found a grass roots expression in the American popular thrillers of the 1930s and 40s and much of the serious interest in pulp fiction and gangster

movies stemmed from France, where the elevation of kitsch is a useful stand-by for critics and academics. In turn, Truffaut, Bernard Tavernier and Jean-Jacques Beineix have shown a fascination for the pulps, adapting work by Goodis, Thompson and Woolrich for the screen.

The crucial question regarding adaptation is to what extent film and fictional narrative answer the same needs and expose the same concerns. If they don't, "faithfulness" to the original is irrelevant. The auteur director, like Hitchcock (who filmed Woolrich's *Rear Window*) or Peckinpah (who wallowed in Thompson's nasty *The Getaway*), is likely to make free with his sources anyway.

David Goodis's *Dark Passage* is less well-known or highly regarded than the Bogart/Bacall film directed by Delmer Daves: the story of a man wrongly condemned, who escapes, is helped by strangers, acquires a new face and finally proves his innocence. For all Daves' bravado in subjective effects and interior monologue (largely to avoid showing Bogart's face until the plastic surgeon does his work), the film is curiously characterless, in both senses.

Film texts and fiction texts make different demands on their material. Obsession with "the original" tends to obscure the curious symbiotic relationship that exists between different media. In Daves's *Dark Passage*, we concentrate on things – ascetics, scalpels, clothes – not people. The ovel – Goodis's novel and the genre as a whole – humanizes; film refines; Robbe-Grillet has tried to make the ovel do film's work and has failed. Endings will be different because film resolves, fiction dissolves; Goodis does the two upstages coding of Daves's film. Film is the abstract medium, though denser, more immediate, less ironic, than the novel; fiction is opened where film is closed, contained. The film *Goody* was about eliter, rings and cars; Alan Ladd and later, Robert Redford were comments on Fitzgerald's myth, not expressions of his character.

Brian Morton

The omnibus editions of novels by Goodis, Thompson, and Woolrich are published under the series title "Black Box Thrillers" by Zomba Books at £5.95 each.

Revelations

Anyone lucky enough to visit Istanbul before the end of October will have the additional pleasure of being able to see one of the most remarkable exhibitions of modern times.

It may seem odd that the council of Europe should sponsor an exhibition that deals with Asia Minor but it is a useful reminder that European civilization cannot be studied in isolation. After all, it was mainly in the prehistoric culture of Anatolia that Greek civilization had its roots; and the part played by the Greeks of Anatolia and the neighbouring islands in laying the foundations of philosophy and science was paramount. In Hellenistic and Byzantine times the influence of the East was omnipresent; and the Turks, though always mindful of their more oriental origins, owed much to their predecessors in Anatolia: there is thus a thread of continuity running through the exhibition, not always easily visible but not to be ignored.

The exhibits are bandomely housed. The great church of St. Sophia, in the first court of the Topkapı Palace, has been thoroughly repaired. The prehistoric exhibits are to be seen in the doleful buildings and the Greek and Byzantine in the church itself. The Seljuk and Ottoman exhibits are in the old stables of the Palace, which have been rehabilitated to make an effective museum. The prehistoric section contains objects illustrating each layer of Anatolian civilization from about the sixth millennium BC. These are of greater interest to the archaeologist than to the art-lover: though there are some lovely gold vessels from Alacahöyük and gold jewelry of the third and second millennium BC, and some handsome bronze objects of the seventh century BC, that we begin to see art as we know it, with the sense of proportion and elegance that we associate with the Greeks.

The Greek and Hellenistic exhibits are a little disappointing. One has to go to the Archaeological Museum close by to see such great works as the so-called Sarcophagus of Alexander or the sphinxes from Tylis. The equipment now in St. Sophia for the most part provincial warfare, though there are some charming statues, as well as some handsome portrait-busts of the Roman period. The Byzantine exhibits

are few but of high quality, including splendid silver dishes from the tenth century, and the exquisite illumination-work of St. Eudokia. But the best of Byzantine art is not movable: it can be seen in St. Sophia itself or in the Kahriye Camii, with its incomparable mosaics and frescoes.

It is Ottoman art that provides the great revelation of the exhibition. Indeed, one could almost wish that had been devoted to Ottoman art alone: there is so much of interest and beauty to be seen. It is so art that manages to combine eclecticism with complete individuality. It is rich and exuberant but capable of elegance and delicacy, and for all its splendour, never vulgar, at least till we reach the nineteenth century. Free sculpture, pictures were forbidden by religion, though miniatures designed to seem the ban. But to abstract design to above all floral designs it is unique, as the brocades and carpets and the pottery from Iznik shows.

The sense of colour and variety to be seen in the metalwork, is extraordinary. Besides the objects in the "Islamic" exhibition there are also what are called, a little alarmingly, "Islamic" exhibitions, all well worth a visit. The rehabilitated Palace of Ibrahim Pasha contains more carpets and furniture, as well as costumes and furniture. In the tekke of the Whirling Dervishes is a superb collection of musical instruments; and the Military Museum is filled with richly decorated tents, used not only for imperial picnics but also for military campaigns. An Ottoman encampment must have looked like an outsize flower garden. More sombrely, in a patch of ground outside Ayasofya there is a large collection of carved tombstones. There are also collections of jewels shown in rooms in the Palace, and examples of calligraphy; for the Turks raised calligraphy to be a major art.

The visitor's reaction to these Ottoman exhibits must be close to that of the Queen of Sheba when she visited the Temple of Solomon. The sight of the things that were the old nation in the East, Europe, that the Ottoman Turks were just millilitaristic and ostentatious barbarians. It becomes clear that Ottoman civilization, till its last decades, was among the finest civilizations in history.

Sir Steven Runciman

The enigma who cracked the code

Andrew Hodges on the little known computer pioneer Alan Turing

Ian McEwan's *The Imitation Game* is one of the most interesting and highly praised television plays of recent years, first shown in April 1980. A feminist play, set in the Britain of 1940, it is of the general kind of work that sets out to retrieve history from its definition and interpretation by those who live "upstairs".

On the other hand, it is distinctive in setting its worm's-eye-view drama not merely within the Second World War (a bastion of male-defined history), but in the heart, or brain, of British operations. It is placed in the Bletchley Park of 1940, when "real" history is being made – by men – in breaking the Enigma ciphers. But McEwan wants to say, through the hero-victim Cathy, that the greater secret lies in male sexual pride, as Cathy finds to her cost when she penetrates and wounds it. She becomes a danger to "security" because of what she knows, and is put away.

McEwan's new film, *The Ploughman's Lunch*, treats the retrieval, or rather the falsification, of history more explicitly; its very title is explained as the commercial invention of an ale-and-beerhouse Merrie England.

The title of *The Ploughman's Lunch* is explained as a bit of fact, rather than fiction, within the film; it is not made clear that so is that of *The Imitation Game*. For this phrase alludes to the very real ideas of the real person Alan Turing, the English mathematician who lived from 1912 to 1954, and who as "Turing" is half-represented in the play as the man whose pride is wounded.

Alan Turing died in 1954, but his problems certainly did not, and it was only in the later 1970s that it became possible to see who he was and what he did.

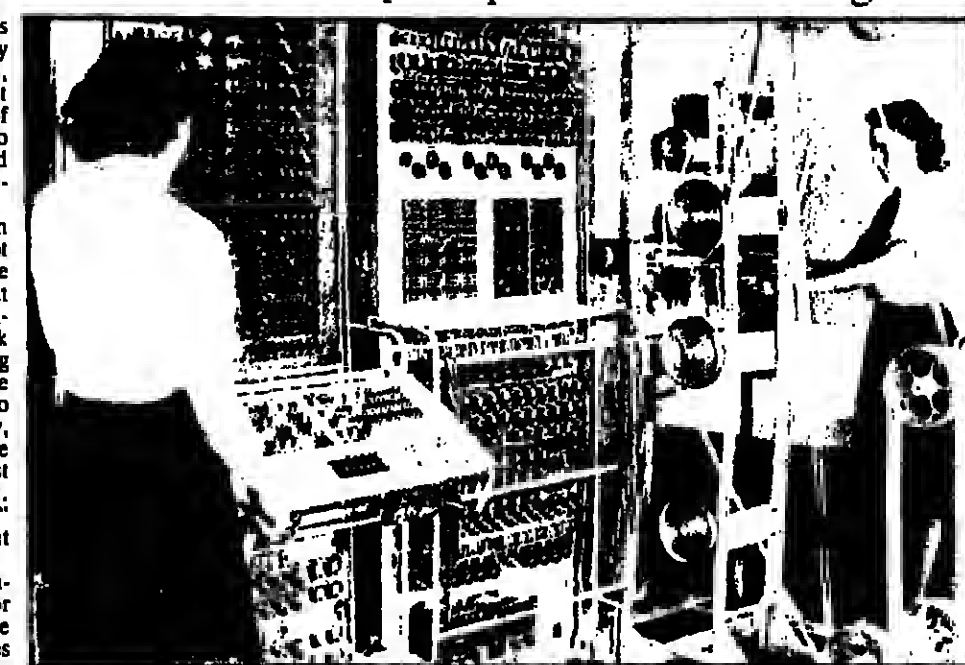
In one way at least this is literally true. The "Ultra secret" of the broken German codes was kept not only from Germans but from everyone else for nearly 30 years after the war ended. So until 1974 no one could tell about what Turing had done, let alone his status as the central scientific figure of the British cryptanalytic effort.

So late a revelation has inevitably given a false impression of the significance of that effort. It cannot help but be seen as a spy addendum to the "real" war of strategy and soldiery.

The mysterious, eccentric atmosphere wonderfully evoked by *The Imitation Game* may also have lent itself to such a view. But the decrypts produced at Bletchley were no less than the information base on which the "real" war, at least the western war, was conducted.

The clearest case is that of the sea war, which in fact was Turing's special province. Until the break into naval Enigma was made in 1941, and then again when it was lost in 1942, the Atlantic was a blank. But Enigma decryption handed to the Navy a daily newspaper's worth of current position reports and operational orders from the other side.

There was an element of sheer luck in it. A quite minor technical change to the U-boat Enigma in February 1942 ruined everything for the Allies for nearly a year – just because it made the process 26 times harder. While it did so, sinkings of Allied ships approached disaster levels. Other quite simple changes in the Enigma, or in its use, could easily have produced a two, three, four year problem. Given the critical situation of 1943, it is hard to see that even major redeployment of Allied air and naval resources to convey protection could have made up for the difference between night and day that the resumed Bologna decryption in fact provided.



The 'Colossus' machine: part of Britain's code-breaking effort

suddenly brought cryptanalysis into the twentieth century. In particular, it brought in scientific method for the first time.

Turing made a joke of this and gave to one rather old-fashioned process the ironic name of ROMSING – a reference to that progressive call for the Resources of Modern Science. But nevertheless, it reflected a simple truth, and Alan Turing's development of a modern theory of statistics for use on the Enigma and other problems was central to the success. This was not magic; it was more like correcting the time warp in which the pre-war establishment had been stuck.

In October 1941 Turing headed the signatories on a desperate letter to Churchill pleading for priorities and resources – a letter not only written over the head of Commander Dennison, who was supposed to be running the organization, but which conspicuously omitted to mention him.

Turing was particularly noted for his disregard, contempt even, for Service and Civil Service formalities. This is not to say that contempt was the most effective means of inducing the dramatic changes required in 1940/42, but that radicalism of his approach, the counterpart of something more easily praised as "originality" in his open scientific work, was still an essential component in what happened to this country in that period, and perhaps therefore to making modern Britain possible at all. And if we put aside the McEwanian reservation that the struggle between the "new men" and the old men was, after all, still all about male control, we have a high-pitched example of that barrier-breaking and muck-raking that those who ask what went wrong after 1945, are inclined to feel was going the right way before 1945.

As for so many others only warfare allowed his skills to find effective expression. And he shared in the great British irony, that the period of standing alone was of such advantage to the power of the United States. Turing had a particular role in implementing the Grand Alliance, where there was a marked element of coiffet as American ambitions overtook British resources. Turing's visit to America in the winter of 1945/46, was, as with the transfer of radar and atomic knowledge, part of the bargain that Churchill struck, and the origin of a most original area of the post-war Special Relationship.

People often ask why, given this amazing flow of information from the horse's mouth, the war could not be ended sooner. The standard response is that it did and sooner than anyone had the right to expect. But there is another question less often asked about Bletchley Park: if the British intelligence could work such marvels so rapidly in those years, why do we not see the same talents working wonders in the aftermath? Again, one answer is that we can; there may well be other examples; but the one relevant to Turing is in the independent British development of the modern electronic

digital computer. It should be explained that although there were very impressive electronic machines, Bletchley by 1944 was never one with the universal property of the computer. That is, nothing had the property now so easily taken for granted, that the hardware can be left untouched, and only the program changed.

But this was what Turing took on as soon as the war ended. By the turn of 1945 he had produced a proposal which was indeed rapidly accepted by the National Physical Laboratory (NPL). At that point it was the most advanced such proposal in the world, incorporating not only a clear exposition of this new "universal" idea, but a detailed logical design, the specification of electronic components, a concept of programming and of programming languages.

As to 1941, it also had that personal drive behind it: he simply wanted to set about constructing it as cheaply and quickly as possible, much as things had been done at Bletchley, within months rather than years. Yet by May 1948 not a single component had been assembled, and Turing resigned. They had written plenty of programs, but had not even the ghost of a machine. What went wrong, then, after 1945?

It was a depressing story of how considerations of rank, age, class, professional demarcation lines, and everything else that Turing had been allowed to sweep aside to 1941, all turned out to count for more than what was officially supposed to be a project of immense national importance, the setting of a new framework for the Americans did. Probably the NPL was particularly bureaucratic, and indeed the later university projects at Cambridge and Manchester were more effective. Turing, of course, was by no means the ideal diplomat. Nor, actually, was all to be lost; after Turing left the NPL some changes were made, a freer structure allowed, and a scaled-down version of Turing's computer plan, the Pilot ACE, emerged in 1950. But this was only a shadow of the vision of 1945, in which Turing had tried to carry over the victory of scientific intelligence into the post-war world.

It is a remarkable fact that the would-be national computer remained almost as secret as Bletchley Park. Turing's design was not mentioned in the biographical memoir that he received as a Fellow of the Royal Society, and was not seriously reviewed until 1975. It may possibly be published in 1984 – an appropriate year for retrieving a forgotten piece of history. The more so, as government has sought out to "information technology" some 40 years later.

On the other hand, it would not be right to celebrate Turing's computer as a great beating of swords into ploughshares, or even ploughshares into lances. It could have been, if government policy had pushed it that way. But there was no such policy; no policy at all; and in the vacuum it was largely the military departments who had an eye for the future. Not very much had changed in 1945.

By this point mathematicians should be murmuring at my failure to discuss what Turing himself would certainly have seen as his greatest work. This is the concept of the "Turing machine", with which he answered a deep problem about mathematics in 1936, before he was 24. The Turing machine supplied a precise formulation of what was to be meant by a "rule" or "procedure", and Turing was able to show, using this definition, that there could be no general rule for the solution of all mathematical problems. But he saw this aspect of the foundations of mathematics as just one application of, rather than the purpose of, the Turing machine idea. His own development of the purely mathematical fields opened up by the Turing machine was fairly limited; his strength lay more in bridging the gap between logic and the material world.

First, Turing showed in 1936, in the course of his great paper, that although there were infinitely many possible Turing machines, the operations of any and all of them could be simulated by just one, the "universal" Turing machine. But this was essentially the idea of the computer, able to play out any of a limitless variety of possible programs, and this was why Turing was able to throw himself so quickly into building such a machine in 1945, once world events had allowed him to acquire a practical knowledge of electronic engineering.

Second, the Turing machine was an important idea in pure science, as opposed to pure mathematics. In the sense that it set up a new framework, a new level of abstraction for the description of the world. Many people would claim now that it is as important a framework as that of physics. And Turing's own claim, made in outline in 1936 and then more and more trenchantly as time went on, was that this level is the right level for the discussion of all mental operations.

Correspondingly, his own interest in computers was not in calculations for weaponry, but in what he called "intelligent machinery". His best-known discussion of the Turing machine framework as a model for the mind was given in an article in *Mind* (1950). This is famous for starting off, in a style very unlike most of the ponderous contributions to that journal, with a rather vague "imitation game", proposed as an operational definition of what it meant by "intelligence".

These ideas had been discussed long before at Bletchley Park; so that Ian McEwan, in attributing a quotation from the famous paper and putting it into the mouth of "Turing", is not being as false to 1940 as might be thought. On the other hand, both Turing's general thesis, and his more technical discussion of the various possible approaches that could be made to the construction of actual "intelligent machinery", are still highly relevant to the late twentieth century.

Turing never got anywhere experimentally – he moved to Manchester



Alan Mathison Turing was born in London on June 23, 1912. Educated at Sherborne and King's, Cambridge, he became an ill-fitting and untutored Cambridge don in 1935. During the war, he was with the Foreign Office and immediately afterwards, the National Physical Laboratory. In 1948 he became reader in mathematics at Manchester University. When he died in 1954, his contribution to Britain's war effort still went unrecognized; his interests outside his academic work were those of a thoughtful solitary – chess, gardening, long-distance running.

in 1948 and enjoyed the use of the computer developed there, but of course this was like a slow, unwieldy version of a little home computer of today, and although useful for the British atomic bomb, had neither the scale nor speed required for his ambitions. Instead he turned to a new field in theoretical biology, the mathematical modelling of animal and plant growth, into which he injected some powerful new ideas.

One of the many ironies of Turing's life is that soon after writing the *Mind* paper, in which he cast himself as the ally of a new science, he was actually on trial himself. It was not, of course, for religious heresy – but for sexual heresy. The police found out that his liaison with a young working-class man in February 1952, and they both went to trial in March. Turing had to undergo chemical castration to avoid imprisonment, but this was only one aspect of what happened.

It also pitted him into that Cold War period when homosexuality was being defined as a prime "security risk", with special pressures coming from the United States. Given Turing's wartime position, his 1942 entry into American secrets, and his post-war work for GCHQ, this was not a convenient state of affairs for anyone. But it was the more deplorable in that Turing refused to go through even token motions of repentance and conformity – until, that is, he killed himself, biting into an apple soaked in cyanide in June 1954.

The true tragedy leaves me with a bone to pick with Ian McEwan. For he has "Turing" in his play, to find himself impotent with Cathy, and then channel his anger by victimizing her for peeping at "the Ultra secret" in his room. I also believed that he was showing us the figure of a repressed homosexual, living a lie before and after the attempted act.

The real Turing, whatever his other faults, was particularly honest as a homosexual, and McEwan makes an unfortunate mixing of fact and fiction.

Unfortunately, furthermore, because it subtracts from a powerful claim that even "nice" men, civilized men, form part of the workings of patriarchy. Almost any other situation would have made a better illustration of a general thesis. On the other hand, *The Imitation Game* did reveal that even "nice" war, civilized war, has its victims: machine intelligence, however, is the product of *iconoclastic* intelligence, is liable to be realized as aggressively "male" intelligence, military intelligence.

The dramatist is free to express a greater truth without worrying about what actually happened. The biographer, though, retains the advantage of knowing that, in this case at least, truth is much stranger than fiction.

The author, formerly a mathematician at King's College London, is a specialist in "invisor theory". His biography, *Alan Turing: The Enigma* will be published in October by Bantam Books.

Events

Exhibitions
To August 7, Walker Art Gallery, Liverpool. *John Ruskin*. (From August 13 the exhibition can be seen at the Abbot Hall Art Gallery in Kendal).
To August 13, Telford, RICA, Cockerham, University of Edinburgh. *The Torricelli Collection* (part of quatercentenary celebrations).
To August 14, Art Gallery, Southampton. *Private View: modern portraits and self-portraits*.
To August 20, Library Exhibition Gallery, Milton Keynes. *Private View: modern portraits and self-portraits*.
To August 21, Barbican Centre, London. *The British Brothers' solid sculptures*.
To August 26, Art Gallery, Aberdeen. *Examples of Modern Calligraphy*.
To August 27, Royal Albert Memorial Museum, Exeter. *White Elephants and Shaven Heads* (solid sculptures, not for people's eyes).
To August 27, Impressionist Gallery of Photography, York. *Barbara Bland* (recent photographs, including pictures taken in the Cappella Gallery at the British Museum).
To August 27, City Museum and Art Gallery, Newcastle. *Lawrence Gowing* (recent paintings).

Performances
To August 28, Salisbury Centre, University of East Anglia. *Treasures from Norfolk Churches*.
To August 28, Mapple Gallery, Sheffield. *Landscape in Britain 1830-1930*. Much isolated exhibition, which originated at the Hayward Gallery in London.
To September 2, Goethe Institute, Leeds. *Dada Scholarship holders*.
To September 4, Cartwright Hall, Bradford. *ALA: the story of the Artists International Association 1928-1933*.
To September 10, John Hansard Gallery, University of Southampton. *Artists to Turkey*.
To September 10, Whitworth Art Gallery, University of Manchester. *Great American Prints: Whistler to Warhol*.
To September 15, Museum of Modern Art, Oxford. *Tolly Colford Eastern Arts Fourth National Exhibition*.
To September 26, Art Gallery and Museum, Exeter. *Lawrence Gowing, The Three of a Kind*.
To October 2, National Gallery of Scotland, Edinburgh. *Robert Scott Lauder's Master Class: McTaggart, Orchardson, Peck and their Edinburgh contemporaries*.
To October 4, Museum and Art Gallery, Newcastle. *Black Box Thrillers*.
To November 14, Yorkshire Sculpture Park, Bradford Hall College, Ellisburgh Park. *Black Box Thrillers*.

MILESTONES

Eugene Kamenka chooses Ludwig Feuerbach's *The Essence of Christianity*

Religion is not congenial to me. I was reared an atheist by Russian Jewish parents whose parents, in turn, had been at least agnostics. My exposure to Christianity has been almost wholly bad. My experience with orthodox Jews and Muslims has not been much better. They are at their best when they have no power and are shaped by other, non-religious traditions. There was a narrowness of spirit, an unspeakable lack of charity in dealing with opponents that characterized all the leading defenders of religion in the period of my youth, when people still thought that man should serve God and not vice versa.

Submission, the surrender of judgment for the hope of comfort and consolation, I suppose, was what critical intellectuals of my generation—or at least those who were willing to talk to us as friends—despised most. We were liberated, or thought we were, by Freud, Marx and Feuerbach. The Soviet Union and the scandalous behaviour of Communist parties throughout the world had shown Marx to be a tricky guide, so Freud and Feuerbach became less equivocal objects of our admiration. In Australia, where I was growing up, in a wartime but still strikingly sheltered, comparatively prosperous and fairly egalitarian society, the struggle was in any case one of class and abstract, while sexual and religious censorship and repression were, in the wider society we lived in, pervasive and real. Culture, as Matthew Arnold had said, required getting yourself out of the way.

Autobiographically, I came to Ludwig Feuerbach in high school, through George Eliot and her magnificent translation of *The Essence of Christianity*. I appreciated, even then, the point that nations have different gods because they have different cultures, that we create god in our own idealized image and that each nation scoffs at the gods of others because they do not correspond to its needs. But I was more excited at that time by the critical, historical and sociological treatment of the Old Testament (a great book that should not be casted from our secular education) at the hands of those under the aegis of the old Rationalist Press. I admired, in their scholarship, their imagination, and shared their slyly correct contempt for the mushiness, lack of intellectual vigour or cultural perceptiveness of the New Testament, even in the Authorized Version, let alone now, when it offers instant redemption without linguistic effort or immersion in a historical tradition.

Ludwig Feuerbach, on whom I have also written a book not admired by those who worship either God or Feuerbach, was not a great philosopher. He was a remarkably perceptive and imaginative man who believed that philosophy should awaken thought instead of constraining it. He saw himself as a liberator and not as a constitutionalist, becoming a Marxist to leave their idols and their political manuals and to follow him into a new, secular, democratic, scientific culture. There neither God nor reason would be treated as kings standing above the world, creating it out of their own supernatural substance and will. Feuerbach was also a man who consistently fulfilled his own intellectual history and traced it in his writing. He was the correct and necessary development of all thought. My fellow workers, and I hope, my fellow students, will find that the thought and the writing of Feuerbach were very seriously indeed. I do not yet regard Feuerbach as one of the great seminal figures of the modern age.

Feuerbach, as I have written elsewhere, was the kind of philosopher who, in his own mind, was confident about the principles they use in making the world capable of great insight and logical sentences. He had no original and imaginative mind, he was

loose, careless, unsystematic and could confuse or gloss over problems in the most shameless way.

Yet, his thought and his confusion dominate our age much as his *Essence of Christianity* dominated European intellectual life in Germany from 1841-1848 and in Russia and to a lesser extent in France a little later. In our modern insistence that the state, religion, law and science have no function but to "serve man", that they are human creations that must never be allowed to react back on man and dominate him, we are Feuerbachians all, sharing both his hopes and his illusions, his intellectual virtues and his defects. "Modern" religion itself has proved Feuerbach right in his analysis of the historical trend of man's situation and of the same time provides a fantasy-gratification of man's wish to overcome that situation in the genuine study of religion. Its recognition that religion is primarily practical rather than theoretical, an "art of life", not only a template of reality but a template for dealing with reality, is of equal and also wider importance. It shows that Marx was wrong in accusing Feuerbach of being a "passive" materialist. On the contrary, Feuerbach correctly saw knowledge as a practical activity, as a grasping with reality to which we select and order and seek to satisfy our wants. In his later life, he was not imperceptive in seeing morality as similarly practical, as expressing a wish that people behave in certain ways in principle possible to people generally, but proclaimed for them regardless of their situation and law as seeking in abolition (by hanging) the culprit so as to make its wishes into reality.

Feuerbach may, indeed be too, confuse or fail to separate his cognitive and his emotive accounts of religion and of human fantasies generally. But in relating the one to the other, he made possible the great achievements of the modern age—the empirical, historical and sociological understanding of religion and of other human constructions and the important insight that knowledge is a form of striving.

He was right in his view that as man ceases to feel helpless in a particular field that field ceases to be of concern to religion. Thus, as man has conquered nature but has failed to "conquer" his own society, he has lost the ability to do the exercises of destructive power, religion has moved more and more into social concerns. As man's feeling of helplessness is before, evil rather than before, evil and lightness, religion comes to be interpreted as primarily moral, in advanced industrial and post-industrial societies (if religion is still not in the villages of Mexico and southern Italy).

Feuerbach's message took 100 years to percolate and it has called, and will call, forth fundamentalist counter-reactions, the feeling that total submission to God's "obedience" is the only consistent reply to Feuerbach. But his thought was and remains a milestone, even if the long path of human development and regression on which it stands is not the highest to the human self-determination and overcoming of alienation in the society of love he hoped for.

The author is professor of the history of ideas in the Australian National University, Canberra. His book, *The Philosophy of Ludwig Feuerbach*, appeared in 1970.

Britons take a Meister class

Is Britain lagging behind Europe in vocational training? A Further Education Staff College survey examined the West German solution.

The Further Education Staff College has undertaken a series of studies of vocational education and training over the last three years in the Federal Republic of Germany. Nine groups of "experts" have examined in depth and reported on specific aspects of provision, past the compulsory school-leaving age with particular reference to the apprenticeship structure. Each expert was chosen to represent both him or her self and a national UK body. Each group undertook an extensive briefing and debriefing session before and after its visit. The studies were designed to encompass all eleven Länder and for each specialist group to embrace a comprehensive range of local, regional and national institutions.

The specific areas under scrutiny included: measures to deal with youth unemployment; vocational counselling and guidance; apprenticeship experiments; the role of the industrial tutor; training in business studies and languages; the education and training of young handicapped adults; education and training for the hotel and catering industry; and for the hairdressing industry. In March three groups separately examined post-apprenticeship career opportunities in business studies, engineering and the hotel and catering industry.

One needs to make a whole series of caveats on the difficulty of comparative comment across systems, particularly taking into account historical and cultural differences. However, it does seem to us that there is a place and indeed a need to take the risk of moving to more reflective, if risky, discussion on the differences between Federal Republic and United Kingdom provision.

Most recommendations for the United Kingdom systems for anywhere outside are discounted on the basis that it is all very well to look at the advantages (and indeed the disadvantages) of other systems. But here we start from a different perspective, a different structure, and while it would be useful to start from somewhere else than where we are, in fact we start from the here and now of the UK in 1983. If we are to start afresh this must be the right time to do so. If ever there was turbulence, change and the possibility of major restructuring, it is in the next year or two. Our reactions on the German system are geared towards shaping the UK education and training systems within a limited period and within the opportunity window provided by discontinuity.

The FDR's secondary system is split among the secondary modern, technical and grammar equivalents, not dissimilar to the English post-1944 recommendations. It is the characteristics of the "dual system" for apprenticeship that catch the UK politician's eye. Eighty-five per cent of those who leave German schools at the minimum leaving age enter apprenticeship contracts. Compulsory day release exists until 18 in all 11 Länder. Apprentices spend four days of in-firm training on curricula agreed centrally and controlled by the central government. There are 460 trade areas in 13 broad categories. Last year only 15 per cent of school-leavers, at 16, had to undertake vocational preparation courses which are themselves tied to the dual system and which generally lead on to apprenticeships.

There is little similarity with the Manpower Services Commission's Youth Training Scheme which is geared to mature rather than relatively small youth unemployment. The Federal Republic also has a sophisticated division between apprenticeship training for large scale industry and commerce and for the training of qualified workers within small firms and craft areas. The apprenticeship



structure provides training skills and status across much wider ranges of trades, abilities and of the population than in the UK.

The routes into further training and qualifications for career development first require several years at work. One may choose either a full-time two-year technician route or the more important alternative, which is the *Meister* level or master craft worker.

This latter route is the engine of the German training and industrial systems. Here only, after apprenticeship and industrial experience plus further training and examinations, is one capable of operating at superior specialist level, as a supervisor, as a trainer in schools or in industry, or as an employer or entrepreneur. One must always remember that the technician and *Meister* levels are based firmly on the apprenticeship structure which is the prerequisite for what follows and this prerequisite involves: industrial commitment of employers and employees to training; legislation and regulations laying down common curricula across the whole country for in-firm training; local industry involvement in testing standards; cooperation between public sector schools and private sector training; the creation of a qualification linking the right to be an employer and the right to be an in-firm trainer.

However, the Federal Republic is not a utopian ideal and all is not goodness and light. In the business studies area, two study groups found content and method not up to the excitement and innovation of the UK scene. They found this more difficult and less developed area than, for example, industry training in Germany. There are *Meister* equivalents but no *Meisters* on the business studies scene and consequently training is less carefully monitored and controlled.

Business studies in terms of coordinating structures has been developing in West Germany only since 1973. On the business studies and post-experience career development front the opportunities offered by in-firm training by the chambers of commerce, or by the *Land*-based schools system are fairly difficult to penetrate and compare. The situation is much more akin to the jungle of UK provision, legitimized in both systems by the term "flexibility".

If we look at three stages in the German systems—secondary, the dual system, the post-experience career development provision—it is the dual system to which the Germans give the greatest weight. Indeed, fervour, in both the secondary and the dual systems there is an implied social contract. The Germans have a relatively low level of social mobility compared with the UK, but in entering apprenticeship from the secondary sector they trade this lack of mobility against relative security, relative status and relatively high earnings.

The dual system is a product of political cooperation towards specific ends. In framing regulations and detailed curricula there has to be political agreement among central government, the *Länder*, employers, the unions, as to what, eventually, the outcomes will be. Very often there are impulses but there is sufficient measure of agreement to move forward to a detailed curriculum and for everyone to be pointing in a similar direction.

Structure and content are agreed by very complex mechanisms, but having been agreed and the movement forward having occurred there is no requirement for elaborate assessment mechanisms, or to go beyond asking

local industry and commerce to test standards of particular students.

Separation between *Land* and industry provision is regarded as the source of flexibility, accordingly providing both for the need for forward planning on the part of the individual. This is the *Land* provides a separate career development opportunity for individuals through the *Fachschule*, where the individual who wishes for upward career mobility can leave his or her firm and take a two-year full-time course for technician and business technical equivalent qualifications.

In-firm training provided by industry or equivalent qualifications to those of the *Fachschule* provided part-time by the chambers of commerce, are much more specifically geared to the requirements for needs than to the requirements for mobility of the individual. This complementarity is the polar opposite to the justification for the dual system where, to some extent, the freedom of the individual is contained within the need for positive achievements at each level. This, in status in society, skilled manpower and an agreed structure to achieve them.

This common link existing at the post-experience level is that until this year those in employment returning for further qualifications were entitled to a grant of up to 90 per cent of their earnings. This year this has switched to a loan system, the effects of which are still uncertain.

What are the implications of all this for the UK? The West Germans have relatively conservative education and training systems. Content and method from secondary to further sectors seem well behind English experiment and development. They do have structures which support an integrated approach to basic training between and among the various factors in society. Co-ordination and coherence plus industrial commitment seem more critical than any other factor. In the UK the MSCs as yet a symptom rather than a cause of change but does provide evidence of an opportunity for restructuring our own systems.

While the heart of the German training system can be traced back to a medieval root, it is the will to make the structure work, the will to make academic and relate the various parts of the system that seem critical.

The implication, however crude, is that the discontinuity provided by the material collapse of Germany after the Second World War created the motivation either to make existing structures work or to mould them in such a way that they were more likely to work in terms of cooperation rather than conflict or the containing of conflict within structures with perceived outcomes.

There are a number of imponderables as to where the will to operate comes from, whether it is rather more a myth than a reality. However, most years tend to agree that there is, now, a discontinuity in UK potential discontinuity in the UK structure alone is not the answer. It is the intangibles of motivation and the desire to make things work that is at the heart of the differences between West Germany and the UK.

David Parker
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The authors are staff tutor at the Further Education Staff College, Exeter and senior lecturer in German at Brunel Polytechnic, respectively.

by Alan Ryan

Animals and Why They Matter: a Journey around the species barrier by Mary Midgley
Penguin, £1.95
ISBN 0 14 022386 X

The moral status of animals has always presented philosophers with a good many problems; too many of the explanations of our duties to other human beings, and too many explanations of the rights human beings have against one another seem to leave animals without any sort of moral standing at all. And yet very few people suppose that it is of absolutely no importance whether an animal is healthy or in pain, free or caged, at risk only from its natural enemies or subjected to the torments of hear-baiters, vivisectionists or thoughtless children. Common sense suggests that it is the sentence of the animal which gives it the sort of moral standing; the strange thing is how many philosophers have disagreed.

Bentham was one of the few philosophers who was firmly on what Mrs Midgley calls the right side. Comparing ill-treatment of animals and slaves, he wrote:

The French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor. It may one day come to be recognized that the number of legs, the villosity of the skin, or the termination of the os sacrum, [Bentham's roundabout way of referring to fur and tail] are reasons equally insufficient for abandoning a sensitive being to the same fate. What else is it that should trace the insuperable line? Is it the faculty of reason, or perhaps the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational, as well as a more conversable animal than an infant of a day or a week or even a month, old. But suppose they were otherwise, what would it avail? The question is not, Can they reason? nor, Can they talk? but Can they suffer?

The point of Mary Midgley's short book is to explore the discomfort which many philosophers feel in face of the claim that animals have rights against us. This discomfort she traces, quite correctly, to the prevalence of social contract thinking. On the contractarian picture of morality, moral rights are the claims which people can make against each other under the terms of an implicit contract—not even philosophers suppose that human society actually started when rational, independent and articulate creatures sat down together to work out the terms on which social life was to operate thereafter. Creatures which are not rational and articulate cannot be supposed to have entered into a contract with us, and therefore cannot be supposed to have rights against us.

This view came in two versions. The extreme one, which leaves Mary Midgley more or less speechless—quite rightly, since one of its vices is that it presents no arguments on its own behalf and leaves the opponent with nothing to speak against—is the view that the irrational brute creation is the object of no moral concern at all. This unlovely view is associated with Descartes and Spinoza; Mrs Midgley tackles it by simply drawing attention to such obvious but important facts as the differences between animals and machines. You might complain that a clumsy driver is ill-treating the clutch of the car he drives; but that is very different from the ill-treatment which a brutal war-monger metes out to the horse or ox pulling his wagon. Animals evidently do feel pain, and machines evidently do not; only a highly educated philosopher could do anything so foolish as to ignore the distinction.

In our own day, writers who don't (as Descartes did) suppose that it is perfectly all right to do absolutely anything to an animal for the sake of a human interest no matter how trivial, still give a misleading picture of our duties to animals. Thus, John Rawls, who whom nobody could be more humane, says that, we do not have

duties of justice to animals. Certainly we should treat them as humanely as possible; what we cannot do is act either justly or unjustly towards them, since they are not in the appropriate sort of contractual moral community with us. To which Mrs Midgley replies that even if we mean to say "Of course, you must treat animals decently; it's only justice that you can neither give them nor deny them", what we will be heard as saying is that there's no such thing as treating animals unjustly—while every parent knows that one of the things children have to be told a good deal is precisely that it's not fair to pets to treat them as if they existed only when their owners took an interest in them.

The argument is generalizable, and is generalized, to rights of all sorts; writers who insist on the exercise of reason as the precondition for the exercise of rights are stuck with having to deny rights to animals—and to babies, the mentally ill and the temporarily comatose. Better surely to say that what is behind a right is an important long-term interest which needs protection. An animal does not, *pace* Rousseau, need to have the sort of self-consciousness which allows it to contemplate its own extinction before we can talk of it having a right to life or liberty. All it needs is to be so constructed that it suffers acutely if its liberty is removed or its life endangered.

No doubt, certain sorts of security aren't needed by animals in the way they are needed by human beings. This suggests that it is compatible with treating animals decently that we should also eat them for food, a proposition which was well defended by Bentham, and which appears—though she is not very definite about it—to be accepted by Mrs Midgley too. At all events, to argue that the moral status of animals is such that we may not eat them requires a good deal more than an insistence on the sort of sensible, utilitarian considerations which Mrs Midgley mostly appeals to.

But what is most attractive about the book is not its defence of humane common sense against philosophical theories of ethics which philosophers have spent a long time trying to get their own throats. That is splendidly done, with a clarity and energy which will appeal to almost everyone who thinks that philosophers are habitually too clever by half; but the real triumph is the defence of good sense about the inner life of the non-language using animal.

There is an old philosophical tradition which holds that animals can neither have much in the way of memory nor anything in the way of real expectation because they lack the linguistic capacity to frame propositions about the past and future. To which Mrs Midgley replies that we all know better than that; it may not be possible for a dog to ruminate on the fact that "I am waiting for my master" is more or less equivalent in meaning to *J'ai vu mon maître*. That is exactly its master is evident from the pleasure it evinces when he does turn up and the disappointment it evinces when someone else turns up in his place. To diminish the inner lives of the rest of creation in order to ease our consciences about riding roughshod over them is not much of an intellectual achievement.

But unlike many people—most notably Peter Singer, though the position is implicit in Bentham and Mill—Mrs Midgley does not commit herself to the view that all preference for one's own species is mere speciesism on a par with such other vices as sexism, racism and so on. The Singer slogan—much like Bentham's—is "equal suffering counts equally". Mrs Midgley doesn't exactly repudiate that view, but she certainly weakens its impact. On her account, there are, and are bound to be, ways in which we quite properly give creatures of our own kind a preference. It's not a failing but a virtue to look after your own family first when it's a matter of saving people from blazing buildings and the like; it is incoherent that any animal species could have made it through the process of evolutionary selection unless some sort of disposition to favour one's kin was built in.

This means that there is a case for marked increase in cultural diversity (so far as this can be reflected in the archaeological record) that has accompanied human progression. At another level, however, *The Identity of Man* is disappointing as a synthetic approach to human identity. Although the book does begin with a review of human biological evolution, accompanied by perceptive comments on the emergence of cultural patterns, this gives way to the standard social anthropological concept of an "unbridgeable gulf between 'man' and 'animals'" (which should read "other animals"). This telescoping of animal diversity into a conglomerate counter-part to human uniqueness is unfortunately characteristic of approaches which deny any real relevance of biological factors to modern human behaviour.

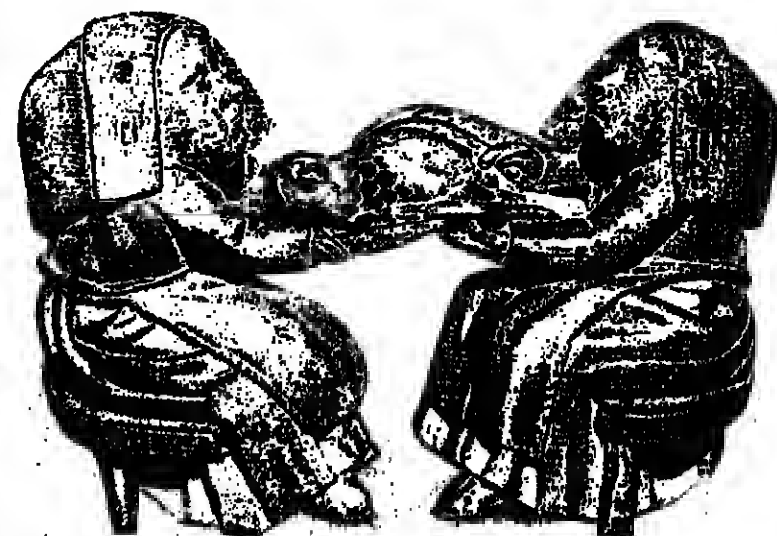
As it happens, the apparent magnitude of the gulf between man and other animals is exaggerated by Clark's statement that man diverged from the apes thirty million years ago. Although there is continuing controversy over the date of divergence, the range of acceptable dates has now been reduced, by common consent, to between fifteen and five million years ago.

Clark is, of course, right to reject facile approaches to biological foundations for human behaviour of the kind promulgated by certain sociobiologists, as such approaches treat culture as an epiphenomenon which can be "reduced" to the products of genes and hormones. But we can scarcely replace this with cultural determinism of a kind that does not even have an articulated paradigm to underpin it. As might so aptly have been said: "The only lesson to be learned from prehistory is that you cannot infer identity from diversity."

R. D. Martin

BOOKS

Being fair to animals



A medieval manuscript shows two women preparing a bird. The picture is taken from Atlas of Medieval Europe by Donald Matthew (Phaidon, £17.50).

qualifying Singer's slogan about equal suffering counts equally by reminding ourselves that it isn't a question of its counting in some abstract way to the universe at large, but to a practical way to us. And if our moral life is such that with all our sensitivities properly in tune, the sufferings of other species don't count as much with us, that may be a fundamental fact about the moral life. But there's no question of Mrs Midgley employing this naturalistic approach as a device for letting us treat animals as badly as we sometimes feel inclined to, just because their species difference from us means we can't entirely make their sufferings our own. For, once again, she appeals to the experience of ethnologists and students of animal behaviour to show that in the wild, animal species can live in a friendly fashion with each other. In this, we might reasonably try to emulate them.

The one thing Mrs Midgley doesn't suggest is that the reason why animals matter is that they provide moral cases

to grapple with. Mrs Midgley is clear that the reason why animals matter is in part that they matter to themselves. As to why that matters in general, she says in conclusion, it is very hard to say; nobody but a nihilist would deny it, but that's not the same thing as saying we know how to show that the nihilist is simply wrong. At any rate, *Animals and Why They Matter* is a splendid example of useful philosophical work—people who are, as many people are, muddled and unhappy about their views on vegetarianism, animal experimentation and the like will find themselves vastly enlightened and encouraged, and a very rare virtue in books on this sort of topic, they will find themselves argued with patiently and aggressively. Among the animals to whom Mrs Midgley is unfailingly humane, those rational animals who make up her audience are, happily, included.

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Cultural diversity

The Identity of Man: as seen by an archaeologist by Graham Clark
Methuen, £12.50
ISBN 0 416 33560 8

There is generally a fairly sharp dichotomy, both in teaching and in writing, between biological and cultural approaches to human social organization. By and large, modern academic authors deal either with man's evolutionary background or causes of human social variation, but not with both together. In *The Identity of Man*, an eminent archaeologist, Graham Clark, attempts to draw together the biological and the social aspects into a single synthesis which sets out from a review of human evolution and ends with some comments on modern society after a broad sweep through the archaeological record.

The author of some twenty books on archaeology, Clark is well qualified to make this attempt, particularly as his own research has been marked by insistence on the need to integrate the archaeologist's findings with relevant information from other disciplines. In fact, it comes as no surprise to learn from the preface that Clark started out as a Cambridge undergraduate with a comprehensive course in anthropology, covering biological aspects as well as social anthropology and history. Obviously, throughout his career (he is now Emeritus Disney Professor of Archaeology at the University of Cambridge), this broad initial training has encouraged him to seek a wide-ranging approach to the interpretation of archaeological remains. In this book, he sets out to draw some lessons from his long and productive career.

The sweeping survey conducted in *The Identity of Man* is also useful in that it reveals more easily general trends which are quite often obscured by fascinating individual detail. One such general trend, to which Clark devotes an entire chapter, is the

marked increase in cultural diversity (so far as this can be reflected in the archaeological record) that has accompanied human progression.

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R. D. Martin

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BOOKS

Geological fabric

Foundations of Structural Geology
by R. G. Park
Blackie, £16.95 and £7.95
ISBN 0 216 91312 8 and 91311 X
Introduction to Geological
Maps and Structures
by John L. Roberts
Pergamon, £20.00 and £7.50
ISBN 0 08 023982 X and 0239203

First-year degree students of structural geology are not well served with modern textbooks, and Graham Park has succeeded admirably in his attempt to provide an up-to-date and well-illustrated introduction. This book should also form a useful springboard to the more advanced texts and specialized papers cited at the end of each section. Before attempting to analyse the stresses that have imposed the structures and fabrics on the rocks, Park first describes the geological phenomena (folds, faults and fractures) - as seen in the field, on maps, in hand specimens and in thin section. He then treats all the common types of structure and fabric in such a way that newcomers to geology should readily be able to understand their form and significance and the nomenclature used to characterize them.

More theoretical considerations are the subject of part two, in which the author shows how forces acting on rocks generate stresses and consequent strains or deformations. "Force", "stress" and "strain", terms often seriously confused in students' minds, are carefully defined. Relationships between stress and strain are established, different types of strain distinguished, and methods of quantitative strain determination are briefly described. Mathematical treatments should be well within the capability of students with only ordinary level mathematics.

Mechanisms for the production of different types of faulting and folding are considered in detail. Faults are analysed in terms of the Mohr stress diagram and there are short but interesting sections on the relationship between faulting and earthquakes and on thrust-zone tectonics. The distinction drawn between brittle faults and ductile shear zones clearly demonstrates the contrast in the behaviour of rocks undergoing deformation at, respectively, higher and lower levels of the Earth's crust. Different mechanisms of folding of layered rocks are discussed in some detail and the effects of superimposed episodes of deformation in produce fold interference patterns in layered rocks are described.

The final part uses the theory of plate tectonics to illuminate the geotectonic environment within which many geological structures are formed. Major structures in orogenic zones such as the Himalayas and the British Caledonides are briefly considered and compared with structures in Greenland. Thus illuminating differences in the type and scale of tectonic activities during the Phanerozoic and Archaean geological periods.

The abundant line-drawings are clear, simple and easily accessible, although some of the half-tone illustrations are rather dark and lack the definition needed to be really helpful to the inexperienced student.

John Roberts has set out with the rather different aim of using geological maps to illustrate rock structures and the relationships between rock units. However, because the interpretation of geological maps requires more information than the purely geometric ground and structural geology, including the geological, tectonic, stratigraphic concepts, the use of primary structures to determine which way up strata are, the tracing of folds, and features of regional metamorphism. Although the book could therefore be seen as an incomplete general geological textbook as well as one dealing with geological maps, it is still a very useful reference for advanced level students and those beginning courses in higher education who wish to interpret and prepare maps representing areas of structural geology.

The treatment of structures is entirely geometric, no attempt being made to discuss the mechanisms by which the structures have been formed. However, Roberts does provide a more detailed description and analysis, together with more elaborate illustrations, of the elements of geological structures than Park has attempted. All the geological phenomena described are illustrated by cross-sections and/or by geological maps - a judicious admixture of synthetic maps, devised by the author, and real maps representing geological outcrop patterns in Britain and elsewhere. A list of those British and United States geological maps especially useful for teaching is also included, together with a brief though well-selected reference list.

A. L. Harris

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Logician attempts

The Logical Foundations of Mathematics
by W. S. Hatcher
Pergamon, £19.00
ISBN 0 08 025800 X

The title should be noted carefully, for it is those foundational studies which are essentially based on logic in one form or another that the book concentrates. It is really a survey of logic attempts during the past century to provide a sound basis for mathematics - including in the term interpreted very broadly, Hilbert theory and versions of axiomatic set theory as well as category theory.

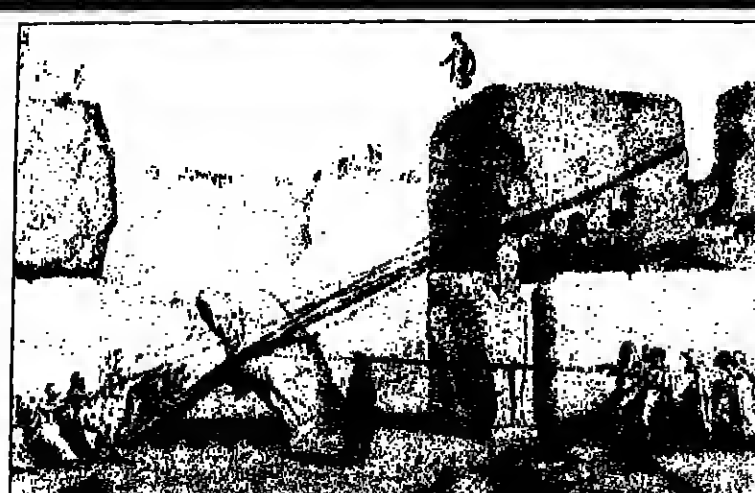
Although there is some historical note taken from time to time, this is not by any means a historical book, nor is it particularly a philosophical one - though of course it is impossible to write on this subject without some philosophical considerations forcing their way in. Rather it is a simple textbook for both mathematicians and philosophers, which expects its readers to do some hard work on the technical details.

The first chapter on first-order theories is a fairly standard treatment, with a particular emphasis on natural deduction; the book properly really starts in the next chapter on the origin of foundational studies. This the author sees as lying in the realization that the nineteenth century had done much less than was intended in making mathematics safe. A great deal more than the natural numbers was needed; in fact, "One had substituted appeal to set-theoretic intuition for appeal to geometric intuition." The logicist programme to rectify this is attributed to Frege.

Before Frege's system is described, however, the question of just what would constitute a foundation for mathematics is taken up; the author highlights six essential requirements. The system must be adequate for a large part of mathematics; it must be derived from intuitively natural principles of an economical nature as possible; and it must be consistent and expressible as a formal system. Finally, the construction of everyday mathematics in it should be natural and orderly.

Frege managed to satisfy most of these conditions by means of a system which, in the version given here, consists of first-order logic with one relation (the belonging relation) and the two axioms of extensionality and abstraction. It is particularly good to have the details of Frege's system set out in full before it is revealed (after 20 pages) that Russell's paradox can be formulated. The system fails, therefore, in one respect - consistency - and this seems to be one in which failure cannot be tolerated. At this point the author briefly mentions Brouwer, noting that an intuitionist foundation would fill the condition of having to produce a large part of mathematics.

But intuitionism does represent a philosophical position concerning the nature of mathematics which cannot be refuted in any simple way. Let us again remind ourselves that we have, as yet, no proof that the mathematics for which we are trying to give a foundation is itself consistent.



Sir Henry Layard supervises as a winged bull sculpture is removed from a doorway at Nimrud and lowered on to a wooden platform. Taken from *Seton Lloyd's Foundations in the Dust: the story of Mesopotamian Exploration*, a revised and enlarged edition of which has been published by Thames and Hudson at £4.95.

In the chapter on type theory which follows, the author begins with a predictive type theory, simpler than Russell's but inadequate for much of mathematics (in fact, not unlike that of Weyl in *Das Kennzeichen*). He then discusses Russell's theory, and simpler versions of it; and follows this with an account of Zermelo-Frege set theory (with a little on von Neumann-Bernays-Gödel theory) and then a fairly orthodox account of Gödel's proof. Quine's two systems get a chapter to themselves and the final chapter, which is the longest in the book, deals with the first-order language of categories and with topology. The view taken here, which is surely right, is that, although early promises that category theory would be a universal cure-all for foundational problems have not been fulfilled, the ideas will still prove to be of importance. In fact:

It appears more and more clearly that what is truly foundational is not some arbitrary starting point... but certain key, unifying notions common to many different aspects of mathematical practice. The comprehension scheme of set theory is certainly one of these foundational principles but not... the only one. The notions of universality and neutrality in category theory are clearly just as important, nor does anyone doubt that others will be forthcoming.

Such a cool appraisal is typical of the approach of this excellent book.

C. W. Kilmister

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Intelligent computers

Artificial Intelligence
by Elaine Rich
McGraw-Hill, £22.75
ISBN 0 07 052261 8

It would be difficult to imagine a more typically twentieth-century character than a computer scientist at the University of Texas, writing about artificial intelligence (AI). Yet Elaine Rich quotes a kindred spirit from the nineteenth century, Lady Ada Lovelace:

In considering any new subject, there is frequently a tendency, first, to overrate what we find to be already interesting or remarkable; and, secondly, by a sort of natural reaction, to undervalue the true state of the case, when we discover that our notions have surpassed those that were really tenable.

The Countess Lovelace was referring to Charles Babbage's analytical engine, the prototype digital computer. The fact that a high-level programming language has been named Ada in her honour suggests that Lady Lovelace's judgement on "computational" matters was astute. Not only was she ahead of her time in seeing the potential implicit in Babbage's unwieldy cog and wheel machine, but her remark could usefully be emblazoned in neon lights for our benefit today.

Too many people either sensationalize AI or treat it with dismissive contempt. The "sensationalists" glibly predict computerized marvels just around the corner, whereas the sceptics assume that well-defined computational procedures cannot possibly result in performance of any interest. However, the potential of AI is greater than the latter group will admit, and harder to achieve than the former group realize.

Dr Rich falls into neither group, but provides a balanced account of AI's achievements and of the problems still to be resolved, many in unexpected areas (even to the professionals, when they started out to design intelligent computer systems). The things we can all do without conscious effort - such as perception, language-use, and common-sense reasoning - are proving extremely difficult to automate. By contrast, it is possible to program a useful level of specialist expertise, at least for circumscribed problems where relatively simple forms of reasoning suffice. Such "expert systems" programs assist with consultant advice in problem areas such as medical diagnosis and prescription, genetic engineering, chemical analysis, and geological prospecting for minerals and oil.

Her book is drier than sensationalist or sceptical tracts for another reason, as it is a textbook for the student learning to write AI programs, rather than a survey for the general reader. However, much of it could be of interest to people who want some idea of how programs are written, without getting lost in programming code. The account of basic computational techniques is clear, and the author highlights the general strengths and weaknesses of different ways of representing knowledge and of defining heuristics for problem-solving. These matters are discussed in terms of their underlying logic, and the final chapter compares the merits of various high-level programming languages - again, without reference to detailed implementation. The chapter on perception mentions but does not discuss recent work on low-level vision, concentrating on ideas based in the more traditional scene-analysis approach.

There is a useful section on "non-monotonic reasoning", a form of inference needed when the deletion of a new belief may lead to the deletion of previous ones. If I invite you to tea, it is sensible for me to assume that you do not have diabetes and to plan the meal accordingly; but if I later find out that you are a diabetic, my beliefs about your eating habits - and other aspects of your life-style - will have to be altered. Traditional logic cannot model such reasoning, since once a statement is accepted (proved) it cannot be deleted.

Twentieth-century Texas, then, has given us a useful introductory text for students of artificial intelligence. As for Lady Lovelace, were she still around to read it, she would be informed - but not amazed.

Margaret Boden

Margaret Boden is professor of philosophy and psychology at the University of Sussex.

Computing in Biological Science, a collection of articles on the contributions of computer methodology to major areas of biological research, has been edited by Michael J. Gelsó and Anthony N. Barrett, and published by Elsevier Biomedical Press at Dfl.150. Topics fall into four main areas: biological modelling, image analysis, structure and dynamics.

Michael Bulmer is lecturer in mathematics at the University of Oxford.

Sex ratios

The Theory of Sex Allocation
by Eric L. Charnov
Princeton University Press,
£32.50 and £9.65
ISBN 0 691 08311 8 and 08312 6

How should animals and plants allocate resources between male and female reproductive functions? Why should most plants be hermaphrodite, whereas most animals have separate sexes? Why should some animals change their sex, functioning as males when young and as females when older (or the other way round)? In species with separate sexes, what determines the population sex ratio? In his book, Professor Charnov, who has for many years been a leading researcher in this field, has applied modern evolutionary thinking to these and other problems. The outstanding merit of the book is the way in which the author has integrated the development of the theory with discussion of experimental and observational tests of the theoretical predictions. And he manages to convey the excitement of the continued interaction between theory, experiment and observation: this is of course the way in which science should be done, but it does not always work out like that in practice.

The book begins, for historical reasons, by considering the sex ratio species with separate sexes. The basic idea is that, if males are less common than females, then a male must on average have more children than a female since each child has one father and one mother. Thus natural selection will favour the production of the rarer sex, and at equilibrium the two sexes must be equally frequent. There are two important exceptions to this rule. First, many parasitic hymenoptera (for example, wasps) lay male eggs in small hosts and female eggs in large hosts. The reason is that the best size determines the size of the resulting parasite, and that female parasites have more to gain by way of increased fertility from being larger than males; it therefore pays the parasite to vary the sex of the egg with the size of the host. As this adaptation presupposes that females can determine the sex of their offspring, it is significant that it is largely confined to those species in which the sex of the offspring depends on whether or not the egg is fertilized when it is laid.

Second, the theory predicts a female-biased sex ratio when mating occurs within small, localized groups in which there is an appreciable chance of a male mating with his sister; experiments and observation on hymenoptera confirm this prediction. The closely-related problem of the evolution of sex-determining mechanisms will be treated in a companion volume by J. F. Bull.

The second part of the book considers sex reversal - a similar idea to the host-size model, in which animals with continuous growth, large size may be much more important to one sex than the other, and it will pay to change to that sex when a certain size has been attained. Thus, female fecundity is highly correlated with size in crustaceans, whereas it probably makes less difference to a male's reproductive success; accordingly, some shrimp change sex from male to female. On the other hand, size probably makes more difference to a male than to a female in species in which the males hold territories, we find examples of sex change from female to male in many territorial coral-reef fish. Furthermore, the theory enables us to make testable predictions about the age of sex change which are remarkably well borne out by the available data.

The final part of the book reviews the theory and evidence about the relative advantages of hermaphroditism and the existence of separate sexes, with particular reference to plants. However, although the author has managed to assemble several pieces of the jigsaw, I feel that more work will be required, both in theory and in the field, before we have the answer to this problem.

Michael Bulmer

Michael Bulmer is lecturer in mathematics at the University of Oxford.

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Universities

University of Cambridge Professorships

Applications are invited for the following Professorships:

Kennedy Professorship of Latin

Vacant by the retirement of Professor E. J. Kenney.

Laurence Professorship of Ancient Philosophy

Vacant by the death of Professor G. E. L. Owen.

Professorship of English

Vacant by the appointment of Professor C. B. Ricks to the King Edward VII Professorship of English Literature.

Erlington and Bosworth Professorship of Anglo-Saxon

(Head of Department)

Vacant by the retirement of Professor P. A. M. Clemoes. The field of the Professorship covers the study of Anglo-Saxon Languages and the Languages cognate therewith together with the Antiquities and History of the Anglo-Saxons.

Drapers Professorship of French

(Head of Department)

Vacant by the retirement of Professor P. Rickard

Professorship of Economics

Vacant on 1 October 1984 by the retirement of Professor R. R. Nelson.

Rouse Ball Professorship of English Law

Vacant by the retirement of Professor H. W. R. Wade.

Goldsmiths' Professorship of Metallurgy

(Headship of Department available - administrative payment £1,898 pa)

Vacant on 1 October 1984 by the retirement of Professor R. W. K. Honeycombe.

Cavendish Professorship of Physics

Vacant by the retirement of Professor Sir Brian Pippard.

William Wyse Professorship of Social Anthropology

(Headship of Department available)

Vacant on 1 October 1984 by the retirement of Professor J. R. Goody.

Pensionable stipends: £20,070

Applications (10 copies), marked "Confidential", should be sent to the Secretary General of the Faculties, from whom further information may be obtained at the General Board Office, The Old Schools, Cambridge CB2 1TT. Names of two referees may be submitted if desired. Closing date: 16 October 1983 except for William Wyse Professorship for which closing date is 15 November 1983.

DEPARTMENT OF GEOGRAPHY A TUTOR IN QUANTITATIVE GEOGRAPHY

is required with effect from 1 September 1983. The successful applicant will be expected to assist students, both undergraduate and postgraduate, in a range of quantitative practical and project work. Proficiency in multivariate methods and computing (especially the use of statistical packages) is essential. Assistance with the Department's MSc in Transport Geography and Development is required and some familiarity with the subject will be an advantage. Salary will be in the range £5,210-£5,678 pa. The appointment will be for 12 months in the first instance. Application forms obtainable from the Registrar, University of Bath, Claverton Down, Bath BA2 9AY. Closing date for applications 18 August 1983. Quoting reference G/87/83.

The University of Manchester Medical Computer Unit

Research Fellow
A Research Fellow is sought for an interdisciplinary project in the making and testing of a general purpose, "expert" system for the diagnosis and management of medical conditions. The project is a collaboration between the Department of Medicine, the Department of Computer Science, and the Department of Statistics. The successful candidate will be expected to have a thorough knowledge of medical diagnosis and to be able to work closely with medical staff. The position is for 12 months, with the possibility of extension. Salary will be in the range £5,210-£5,678 pa. Applications should be sent to the Registrar, University of Manchester, Oxford Road, Manchester M13 9PL. Quoting ref. 183/83/222.

University of Leicester School of Education

TEMPORARY LECTURESHIP IN THE TEACHING OF ENGLISH AS A FOREIGN LANGUAGE

Applications are invited for a temporary lecturer to teach English as a Foreign Language in the School of Education. The post is for 12 months, from September 1983 to August 1984. The successful candidate will be expected to have a thorough knowledge of the teaching of English as a Foreign Language and to be able to work closely with the staff of the School. The position is for 12 months, with the possibility of extension. Salary will be in the range £5,210-£5,678 pa. Applications should be sent to the Registrar, University of Leicester, University Road, Leicester LE1 7RH. Quoting ref. 183/83/222.

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UNIVERSITY OF OXFORD RADCLIFFE SCIENCE LIBRARY

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UNIVERSITY OF STRATHCLYDE Department of Office Organisation

LECTURESHP

Applications are invited from suitably qualified graduates for a Lectureship in Information Studies (level 1) from 1 October 1983 in the Department of Office Organisation. Candidates should have a thorough knowledge of office automation, office information systems and business information systems. Further particulars (Ref: 48/83) are available from Academic Staff Office, McCance Building, 16 Richmond Street, Glasgow G1 1RN. Applications with curriculum vitae (2 copies) and three references should be lodged with Academic Staff Office by 26 August 1983.

University of Manchester Research Associate (HALF-TIME)

Applications are invited for a research associate to work on a study of the social and cultural aspects of Down's Syndrome children. The post is for 12 months, from September 1983 to August 1984. The successful candidate will be expected to have a thorough knowledge of the social and cultural aspects of Down's Syndrome and to be able to work closely with the staff of the School. The position is for 12 months, with the possibility of extension. Salary will be in the range £5,210-£5,678 pa. Applications should be sent to the Registrar, University of Manchester, Oxford Road, Manchester M13 9PL. Quoting ref. 183/83/222.

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Overseas

WAT

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LECTURER PHYSIOTHERAPY/ NEUROSCIENCE

Teach neurophysiological techniques of exercise, neuroscience and related disciplines in the School of Physiotherapy. Supervise physiotherapy clinical practice in neurology. A registered physiotherapist with considerable teaching experience in neuroscience is required. Higher degree advantageous. Tenured appointment. (Ref 609)

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Teach occupational/organisational psychology at postgraduate level and units in perception and human performance at undergraduate level. Also supervise postgraduate student research. Relevant postgraduate qualification (PhD preferred), teaching at tertiary level and research experience required. Relevant professional experience desirable. Two year appointment available, from early 1984. (Ref 581A)

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Overseas continued

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- (d) An allowance of LD100 per month for a married man accompanied by his wife, or LD70 per month for one who is single or unaccompanied, for rent and accommodation. The Faculty has a number of staff flats and guest houses.
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Applications in writing please, specifying the field in which position is sought, enclosing a curriculum vitae and day time telephone number to:
Mr K. Rhy-Jones, Education Division, Pigeon Enterprises Ltd London House, 266 Fulham Road, London SW10 9EL.

Closing date: 15th September 1983.

Research & Studentships continued

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The Times Higher Education Supplement August 12

A special issue to commemorate

THE 13TH
QUINQUENNIAL COMMONWEALTH
UNIVERSITIES CONGRESS

which will assemble at the
University of Birmingham
between 14-20 August

The theme of the Congress will be
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Articles planned for publication in this issue
include:

- The social consequences of technological innovation, Sir Bruce Williams, director of the Technical Change Centre and former vice-chancellor of the University of Sydney.
- University/industry partnerships - Sir Henry Chilver, vice-chancellor of Cranfield Institute of Technology.
- The development and transfer of technology - Keith Pavitt, University of Sussex.
- Continuing education - Dr John Horlock, vice-chancellor of the Open University.
- Surveys of the state of higher education in Canada, New Zealand, Australia and India by THES correspondents.

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Research & Studentships

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Enthusiastic and well-qualified candidates are invited to apply for a research assistantship leading to a higher degree in COMPUTER NETWORKING or DIGITAL SIGNAL PROCESSING or the ELECTRONIC APPLICATIONS OF BIOTECHNOLOGY in the Department of Electrical and Electronic Engineering.

We would expect the research assistant to undertake tutorial duties during the two years of assistantship. The salary would be on the incremental scale of £5,416-25,125 per annum.

Further details and application forms may be obtained from the Deputy Registrar, to whom completed applications should be returned by 18th August 1983.

ROYAL INSTITUTE OF HIGHER EDUCATION
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University College of Swansea

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Applications are invited from suitably qualified persons regardless of sex, religion, race, colour or national origin for appointment to the post of

SENIOR LECTURER

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Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment, are obtainable from the Secretary, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE or the Registrar, University of Natal, King George V Avenue, Durban, 4001, with whom applications on the prescribed form, must be lodged not later than 9 September 1983, enclosing the reference DSW/83.

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Applications are invited from suitably qualified persons regardless of sex, religion, race, colour or national origin for appointment to the post of

LECTURER IN MECHANICAL ENGINEERING

Consideration will be given to applicants with teaching and research interests in one or more of the following areas: mechanical design, manufacturing, control, thermal sciences, and experimental methods. Candidates with a Ph.D in Engineering will be preferred. Salary in the range: R12 657 - R22 173 per annum. The commencing salary notch will be dependent on the qualifications and/or experience of the successful applicant. In addition, a service bonus of 80% of one month's salary is payable annually.

Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment, are obtainable from the Secretary, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE or the Registrar, University of Natal, King George V Avenue, Durban, 4001, with whom applications on the prescribed form, must be lodged not later than 9 September 1983, enclosing the reference DES/83.

Miscellaneous

Equal Opportunities Commission PUBLIC NOTICE

Notice is hereby given that the Equal Opportunities Commission has been established. The Commission is a body which is responsible for the promotion of equality of opportunity in the workplace. The Commission is responsible for the promotion of equality of opportunity in the workplace. The Commission is responsible for the promotion of equality of opportunity in the workplace. The Commission is responsible for the promotion of equality of opportunity in the workplace.

Don's diary

Monday

Spend day at workshop on the University of the West Indies Distance Teaching Experiment, or UWIDITE, as it is popularly known. In effect a glorified International party telephone line, this permits a class to take place simultaneously in Barbados, Jamaica, Trinidad, and St Lucia, and for students to ask questions irrespective of the actual location of the lecturer. Money permitting, it is hoped to extend the system, and it clearly offers immense possibilities to a university whose three campuses are on islands at a considerable distance from each other, and which is also funded by the governments of other islands whose inhabitants, because of difficulties in communications, can at present enjoy only a limited participation in its benefits. It is also hoped that UWIDITE will act as a unifying influence at a time when the trend is towards greater autonomy for individual campuses. I notice that administrative staff are very interested in using the network for conference purposes! After the opening session, attendance drops considerably for the afternoon, which surprises me. The workshop is, of course, conducted over the system, and a very nice American lady in Jamaica talks to us nineteen to the dozen on the importance of speaking slowly in distance teaching. She also uses some very American jargon which leaves at least those of us in Barbados rather baffled. Even after explanations, I am still wondering just what is a buzz group.

Receive yet another letter of rejection. This job ends in July, and I still don't know what I will be doing in September.

Tuesday

Second day of workshop. Numbers, at least here, have dropped again. Authoritative gentleman in Trinidad tells us how to prepare suitable teaching materials for this sort of set-up. Find myself wishing I knew more about how the Open University works. Some technical problems still need to be sorted out - it seems that if it rains too heavily anywhere in the Caribbean, the quality of the reception suffers quite noticeably. In the afternoon we lose Jamaica altogether.

At the end of it all, charming chemistry lecturer points out that we can now add "Have attended two day mini-course on teleconferencing and distance teaching" to our cvs.

Wednesday

After dealing with a few things in my office, I walk down the hill to the Barbados government's Department of Archives. This comprises a very favourably with Kew, at least in the nearly any document you ask for will be brought to you within five minutes. The staff are extremely efficient, and it is always a pleasant place to work. The only serious drawbacks are that they need more money for conservation purposes, and there are no photocopying facilities - all copying has to be taken in the university, as and when time and staff availability permits. Lunchtime entertainment is, sometimes, provided free of charge - a large family of monkeys lives in the woods behind the archives' buildings, and puts in an appearance from time to time.

I am working my way through a box of nineteenth century clerical testimonials. Cannot help but think that some very strange characters came out here as "clergymen" of the Established Church.

In the evening feel special glow of kindness to humanity as I mark an essay handed in several weeks after the deadline.

Thursday

Those who know me in England tell me, think of me as an early riser, but I am on the steps of the archives by eight o'clock, waiting for them to

open, and by 8.15 am settled at a table. Finish box of testimonials, a process interrupted by a phone call from the Government Printing Office. A fortnight previously I bought from them a copy of the Copyright Act, and they have been pestering me ever since - the clerk put the carbon in the wrong receipt they gave me and on their copy did not tally. They accordingly wanted the receipt back and I kept forgetting about it, finding it difficult to believe that such a mistake over a receipt for two dollars (rather less than 75p) could be that important. The Printing Office now propose to send a messenger to collect it. A little stunned, I meekly inform them that I will be in my office on campus.

Sure enough, the messenger arrives. The tip from town must have cost more than five dollars in petrol. Receive apologetic phone call from student with three overdue essays. Accept explanation of ill-health. Feeling of self-congratulation at own benevolence vitiated by thought that essays will have to be marked.

Friday

Go to Bridgetown. Visit the public library, which is an excellent institution. Afterwards do some wandering about town, and am very pleased to discover obscurely-published history of local church in one of the bookshops. Not so pleased at wasting an hour and a half in futile attempt to secure government identity card. There is a large queue moving very slowly, and I have another appointment. This is a restaurant lunch given by the department for a visiting Nigerian colleague, who is the external examiner for the African history paper. Very pleasant occasion. Sample pepperpot for the first time, also salt fish with okra - once a poor man's dish, this is now something of a delicacy.

Saturday

At home reading tome of great importance, and quite penitential dullness. Cannot allow myself to feel too virtuous, as I should have read it long ago.

Sunday

Woken early by dog barking. Stick head out of window to discover what is going on, and disturb small group of children raiding the cabbage patch. As the whistling frogs, the caterpillars and the monkeys also appear fond of our vegetables, not much gets as far as the table. Predial larceny is still too common, and similar incidents across the island must do considerable damage to an economy which is still, in spite of the importance of tourism, heavily dependent on agriculture.

Spend most of the day reading report of a trial for obeah which took place in Barbados in 1821. Very excited to find it an almost classic account of witch-finding, with clear parallels in both Africa and the British Isles. Modern synthetic faiths in the region have been quite extensively studied, but it is unusual to find such detailed information on non-Christian beliefs in the West Indies at so early a date.

Telephoned by student wanting to know what she could read on the subject of the European impact on the aboriginal peoples of the Caribbean. The exam is next week.

Monday

A holiday. Stay at home and write long letter to the head of the Caribbean Lexicography Project on a number of linguistic points raised by yesterday's reading.

John Gilmore

The author is a visiting lecturer in the department of history at the University of West Indies in Barbados.

Education has become one of the hottest political topics in America. After years of neglect, the nation's schools suddenly are in the spotlight. Every major politician has his or her own special formula for school improvement and President Reagan has vowed to keep the issue alive during the presidential campaign next year.

How Reagan learned to love school



Ernest Boyer

It's ironic that the trigger sparking the current debate came from an administration whose record on publicly funded schools deserves a falling grade. For two consecutive years, Reagan sought to cut federal support for education while advocating prayer in schools and tax relief for parents who send their children to privately funded institutions.

A national commission on excellence in education, appointed by secretary of education Terrell Bell, released a report last April proclaiming that there was a "rising tide of mediocrity" enveloping the schools. The national commission report was soon followed by a spate of other pronouncements and formulas for reform, all arguing for tighter academic standards.

This push for school improvement was predictable. In recent years Americans have been shocked and disappointed by reports of falling test scores and the inability of many of our students to achieve high academic standards.

Still, there is a growing concern that while the national commission report has captured headlines with inflated rhetoric, it exaggerates our failures, ignores our achievements, and offers simple solutions to complex problems.

Missing in the current debate is the recognition that the American school, perhaps more than any other institution, has felt the impact of changing family patterns. The number of children under 18 who are affected by divorce has more than doubled since 1960. Nearly one out of five families is maintained by a single woman. Two thirds of these mothers work. About half the children now entering school will have lived in one-parent homes by the time they graduate from secondary school.

This shift in family life has caused the school to take on the responsibilities of the home. Teachers become counselors to students whose parents are caught in a divorce. And schools find little support at home when tougher standards are imposed.

Lawson haters versus the loathers



Jack Straw

The Conservative Party, it is said, is divided into those who loathe Nigel Lawson, and those who merely hate him. The knowledge that this is so, and there are few Conservative members who now privately seek to disguise this truth, has kept me going through the first dregs of otherwise depressing six weeks of the new Parliament.

There is nothing we can do by ourselves to defeat the Government, but that does not mean there is nothing we can do. We can destabilize the Government, undermine its self-confidence, not least by exploiting the tensions which exist among members of the Cabinet - and the very obvious tensions which exist between the Thatcherite masters of this new Conservative Party, and the dispossessed Rym and Gilmore, who brood and glow from the backbenches waiting only for their moment to strike.

Monstrous the Parliamentary Conservative Party will be a nightmare, as the Government's lack of support, as the public mind turns to the Prime Minister's

Also missing in the brouhaha is a shared vision of what schooling should accomplish. Today, the push for excellence is being linked to economic recovery and to jobs. We're told that better schools will move the nation forward in the high-tech race.

Others argue that schools must do more than put the nation in a competitive advantage. We may not yet be a global village but surely our sense of neighbourhood must include more people and cultures than ever before. The world's 165 independent nations and 50 other political units are now completely interlocked. The vision of education must not only be national but global.

Everybody acknowledges that national interest must be served by the schools. Still, there is also alarming evidence that American students are poorly informed about the world and almost uniformly devoid of skills in foreign languages. But some school reformers argue that if education can not help students see beyond themselves and better understand the interdependent nature of our world, each new generation will remain ignorant and its capacity to live confidently and responsibly will be dangerously diminished.

The author is former United States commissioner of education and president of the Carnegie Foundation for the Advancement of Teaching.

Another source of confusion in the lack of agreed-upon priorities for school improvement. The national reports have offered us a platterful of proposals. They range from tightened course requirements - more English, more science and mathematics - to computer literacy, to more homework, and to a longer school year, to name a few.

President Reagan has seized on one proposal - "merit" pay for outstanding teachers. At present teachers' pay is good and bad or locked into a seniority system that does not differentiate when it comes to salaries. By pushing "merit" pay, the president has identified himself with the cause of school improvement while also challenging the nation's largest teacher union - the National Education Association - which also happens to be closely identified with the opposition party. By lengthening the school year and increasing homework - or even raising teachers' pay - appears to offer few simple remedies from the past rather than a challenging vision of the future.

One final point. In the great debate about schooling in America, the emphasis appears to have shifted from concern for equality of opportunity to concern for educational quality. This is occurring at the very time the ethnic and racial composition of young America is changing.

It is projected that by 1990, minorities will constitute 20 to 25 per cent of the total US population and more than 50 per cent of school enrollment.

Of special concern is the fact that minority young people are precisely those with whom most of our nation's schools have been least successful. Clearly, equity and excellence cannot be divided.

A push for excellence in American education is overdue. We need to clarify the goals, tighten academic standards, and improve support. But there is a growing fear that politicians will capture the debate and that, after the national election, school reform will fade as fast as it emerged. If this occurs, public confidence in education may continue to decline and the gap between the nation's hopes and have not will continue to expand.

The author is former United States commissioner of education and president of the Carnegie Foundation for the Advancement of Teaching.

Parliament will not now be established until Christmas. That appointment has been delayed by the usual cosy conspiracy of the Whips Offices. It's sad, because they each could have conducted swift inquiries into the effect of Nigel Lawson's cuts, which could have provided hefty ammunition, inside Cabinet and outside, against any further imminent botchery.

The number of Tories who have moved into the loathing camp has increased dramatically since Lawson's statement on July 7. The cuts were so plainly a product of panic, inexperience, and poor judgment. They were justified on the ground that Treasury forecasts which became available just after the election indicated both an overshoot on borrowing and the money supply, and a significant overspend on "demand related" services, like unemployment and supplementary benefit, and drug prescriptions.

But three weeks later it now transpires that the Public Sector Borrowing Ratios on target, and to the extent that the money supply figures are worth worrying about at all, their increase can largely be explained by technical factors. Stockbrokers Phillips & Drew have pointed out that this year's July financial figures are very like last year's: and that last year Chancellor Howe used them to justify an increase in expenditure. But last year was pre-election year, and what a difference that makes.

One other point: which has been missed so far is that the real overspending culprit is not the Welfare State as Lawson would have us believe, but the Common Market. Overspending here seems to account for over £600m of the additional £1 billion which Nigel Lawson says he has to find. The rebate for this year, negotiated by Margaret Thatcher at Stuttgart is £350m less than anticipated in the Public Expenditure White Paper; while direct UK spending on the CAP is up by £257m in the supplementary estimates.

This time, readers of *The Times* should note: the choice has been between a budget, with apologies to the original book, which makes us powerful, but only makes us fat.

The Select Committees of the new

The needs of Londonderry

Sir, - Eric Robinson's letter (*THES* July 15) was most welcome to those of us who are trying to keep some form of sanity in a mad, mad world. What Magee for the Londonderry campus, as its new masters insist it should be called) needs are autonomy and staff. The task is by now well defined: it was beginning to be done but expansion into part-time degree courses, vocational courses (certified and non-certified) and other programmes clearly identified was continuously blocked (as my files will show) by decisions taken outside Magee, mainly at Coleraine. It is degrading to the city and educationally wasteful that the needs of the west of this province shall be determined by the interests of the north and east.

I am not convinced that the new university institution, with its dogmatic approach to a unitary structure across four widely dispersed campuses, will give its Londonderry campus the autonomy it needs; the provision or not of courses will still be determined by staff located at Coleraine or Jordanstown. It certainly will not give the campus staff, a maximum of 25-30 full-time staff out of more than 750 academics) is envisaged. If the parliamentary select committee's proposals give more hope for autonomy and staff for this needy area, then they should command the support of majorities in the city. But this would call for a massive change of heart on the part of government and those who have dealt with both the province's administration and central government know that miracles just don't happen any more. Perhaps we are just as mad as the others by daring to hope.

Yours sincerely,
ALAN ROGERS,
Director, Magee University College,
New University of Ulster.

Disabled students

Sir, - So, yet again, the picture of a person with a disability has been used on the front page of a newspaper (*THES*, July 22). The student's achievement and the support of his guiding are newsworthy. But isn't it far more noteworthy that the obtaining of a degree by the student who is blind should be considered front-page news by *The Times*? The article presumably tries to reassure us that the system is working well and that if a disabled student is stereotypically brave and independent, then he or she will succeed.

But is everything really right in a higher education system where almost all buildings in a large number of universities and polytechnics are inaccessible to wheelchair users; where inaccessible buildings are still being built; where the percentage of course-work available on tape for students with a visual handicap is small; and where some lecturers have refused to teach students with certain types of disability, such as deafness, because of the extra work it may entail?

It is sometimes argued that such articles as the one last week showing a disabled student being successful encourage disabled students to enter higher education establishments and encourage the establishments to accept disabled students. This is extremely patronizing and totally misses the point of why there are, proportionally, so few students with disabilities. The effect on most people is simply to reinforce their stereo-type of a disabled person as a remote, unnatural object, to be feared and at rather than to be a fellow human being. How much longer must we wait before students with disabilities are accepted as ordinary members of their educational establishments, appearing in photographs alongside able-bodied fellow students, rather than being exploited in this way?

Yours faithfully,
NICK CLARKE,
Postgraduate,
Department of Pure Mathematics,
Leeds University.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

LETTERS TO THE EDITOR

Lord Beloff's unkind criticism

Sir, - In his report last year on the Social Science Research Council, Lord Rothchild (Cmd 8554) incorporated the text of a communication from Lord Beloff, in which the latter said, *inter alia*, the following:

"I would doubt, knowing something of its director, that the country will be much helped in dealing with the humbling issue of race relations by the unit recently moved from Bristol to Aston."

Lord Beloff has chosen neither to withdraw nor give any substance to this remark.

My council has therefore asked me to make it publicly clear that Professor

John Rex enjoys its complete confidence as director of the research unit on ethnic relations at Aston. We know Professor Rex as a sociologist with an international reputation, and we were extremely pleased when he persuaded him to give up his chair at another university and take on this task for us. Professor Rex, like any other academic, is well used to defending himself in the normal run of controversy, but in light of the nature and origin of this particular criticism (if so it feel it appropriate to speak for him).

We have no wish to prolong the argument about Lord Beloff's re-

Voting methods

Sir, - Clearly I must owe Brian Hill (*THES*, July 22) several apologies, for being so remiss as to judge his earlier letter in the light of practical politics. (He had gone to the trouble of writing a letter to *The Times* drawing attention to a particular voting method, and had presented it in a very favourable light. Admittedly he then left it to others to draw their own conclusions, but in the crude world of practical politics I am afraid the distinction between this and "seriously advocating" the method is too fine to be easily discernible.

He also quotes a source, from 1909, to show that it is not a "myth" that there is a close personal link between an MP and his constituency. In the crude world of practical politics, 1909 is long enough ago to be regarded as almost in mythological times, judgments being made on the basis of how politics have been conducted rather more recently. This seems to be true not just of practical politicians, but of voters, most of whom will not be able to recall 1909. It is no doubt possible to disregard the attitudes of actual voters as being irrelevant; there is no need for the constituents themselves to be aware that a close personal link is supposed to exist, or used to exist, or even does exist. What certainly is relevant, however, is that in the practical politics trade the word "myth" is often used as a euphemism, for something which is claimed to exist but actually does not. I accept that I should not in this particular context have used the word "myth", and should have substituted a more appropriate word of similar length.

I also regret that when I said that multiple voting had "long since been considered and rejected" by advocates of a fuller voting system, I did not make it explicit that I was not thinking back as far as the first Reform Act. I confess that I had not regarded the Whigs of the 1830s as supporters of fairer voting in the modern sense. I indeed gave absurdly recent references

Yours sincerely,
BRIAN MEEK,
Director,
Computer Unit,
Queen Elizabeth College,
University of London.

Mapped out

Sir, - New Zealanders are not accustomed to seeing maps of the world on which their country does not appear. Such maps are usually produced in Britain, have the Greenwich meridian as the centre line and New Zealand is dropped, being inconveniently positioned on 180° longitude, just where the cartographer wants to "cut" the map. On the map of the world illustrating John Piper's article on plate tectonics, "Rock and roll on a massive scale" (*THES*, May 27) the centre line is 100° west and New Zealand should appear almost full frontal. Ales, in spite of the fact that our country has teetered on the boundary between the

Scottish transfer

Sir, - You stated in your leader of July 29 that Glasgow College of Technology is "apparently delighted by the prospect of transfer" to central institution status. I do not know who the college council and the students' association both have a policy against the transfer. We in the students' association are actively campaigning against the transfer and hope to attract support for our views on the matter. Apart from this, small discrepancy was wholeheartedly endorse what was said in the article.

Yours faithfully,
IAN WRIGHT,
President, Students' Association,
Glasgow College of Technology.

Factual error

Sir, - Michael Holroyd is quite right (*Letters*, July 22) to criticize the phrase "unlike fiction, biography is based on fact", which appeared in my article on Keynesian biography (*THES*, July 8). This "apparent truth" slipped into the article as first submitted - a month before it appeared. I subsequently changed it to "unlike fiction biography is based on fact". But my efforts to get the change incorporated into the final text failed. So the published view of the relationship between biography and fiction is the printers', not mine.

Yours faithfully,
ROBERT SKIDELSKY,
32 Great Percy Street,
London WC1.

Union View

Universities need holiday from shocks

It's hucket and spade time again. The end of July/beginning of August represents a slight lull in the merry-go-round and hectic activity that now passes as the norm in university circles. Even this, though, is relative. Across one's desk pass cases of members threatened with all sorts of personal inquests.

Ministers continue to make statements about Government expenditure. But then ministers, if whatever party, always want to make statements on Monday Thursday or when the MPs have their bags packed and their children waiting in the car outside. And then, of course, there is the University Grants Committee, which has just issued, at the time of writing, a recurrent grant letter to institutions.

But there are still a few weeks to meditate on what has been another hectic year in the universities. If I were a patient on the operating table, the university system would perhaps be best described as "now coming out of shock". It has not only been the staff who have seen their careers and expectations devastated since the 81 cuts, but also university administrations, which have had to live through what industrialists would call "management by crisis".

The overwhelming battle that has been on during the year has been for us the battle that has taken place against compulsory redundancy. The last thing the AUT wishes to do is to gloat over the victories gained during the last year. What has been important is that it has taught several of the more hawkish vice chancellors that they are accountable to academic staff. It is, in fact, the vice chancellor, that determines academic policy.

Also of importance have been the countless problems sorted out behind

AUT

the scenes. Many of these have been resolved to the satisfaction of the members and the institutions. Although it may be a cliché to say this, all the defence against compulsory redundancy could not have been possible without the self-sacrifice of so many members of the AUT, for literally thousands have given up tenured posts and accepted early retirement to protect the careers of younger colleagues.

Another battle which we could at least claim as a "score draw" concerns the *raison d'être* of the universities. William Waldegrave, the minister who has since ran out of briefs, announced publicly on behalf of the Government in March that "Britain does need its universities".

Since high tech is now in vogue in Government and City circles, we have at least had money earmarked for certain specified research areas. There has been a welcome recognition, as well, that the take-up of ideas produced in universities has been appalling.

The university system, as it comes out of shock, is going to look very hard on the way it has been treated in recent years. Come September and beyond, the need is for a university system that is altogether more self-confident and assertive in its own defence. The AUT believes that, under colossal pressure, the universities have done a first-class job; that tenure is absolutely essential to the well-being of the system; that vice chancellors ought to take a much more public position in defending the system and its staff. And that many of the scandalous features of the existing system, such as the treatment of research staff, are in need of overhaul. It will not be an easy DES official put to us recently, in private. He said that if the Labour Party had been returned, we would have been in for a very long time, but now we are in for "more of the same". Sitting here now I would like to think that this will not prove to be right.

John Akker

The author is deputy general secretary of the Association of University Teachers.